DOLÆUS JOHANNES,
STEPHENS WILLIAM

DOLÆUS UPON THE CURE OF THE GOUT BY MILK-DIET

Johannes Dolæus

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Dolæus J.

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Содержание

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To the Right Honourable Marmaduke Coghill*, Esq;* L. L. D. *Judge of the Prerogative Court, one of the Commissioners of the Revenue, Provice-Chancellour of the University, and one of His Majesty's most Honourable Privy Council.*

SIR,

It cannot be thought too great a Strain of Compliment, to dedicate the following Papers to you, since they were undertaken with an Intention of serving you and some of your Friends, and are published at their Request. I am in no great Pain about their Success, since you have approved my Part therein. Popular Applause is often lost in the two quick or eager pursuit of it, and Censure is too great a Mark of Eminence for me to be afraid of; so that if my Friends approve my Conduct, I shall be satisfied.

It may be thought Vanity in me to name you, among my Friends, but I have received too many Favours from you, in Instances of some Consequence to me, not to reckon you so, which I must be very insensible not to be proud of, and ungrateful not to acknowledge; and to which the utmost Services in my Power are but a very inadequate Return.

It is not to be expected that any Thing I can say should add to that Esteem and Respect you deservedly hold among all that know you, and therefore I forbear to enter into any Parts of your Character, or your Conduct in publick and private Life. The great Stations you so justly fill, give you Opportunities of doing kind Actions out of the Power of more private Persons, and of satisfying your Inclinations to Benevolence, which are apt rather to out-run your Power than fall short of it, and seem bounded by nothing else: But I am only in this Place to present you the following Papers, with my Wishes that they may contribute to your Health or your Entertainment, and to acknowledge myself

Your most obliged and

obedient humble

Servant,

Will. Stephens.

PREFACE

Some Gentlemen of very great Worth, whose Desires I could not resist, engaged me in the Translation of the following Treatise of Dolaeus*; they thought it might be of Use to Persons afflicted with the Gout, to have an easier Way of coming at the Facts contained therein, by naturalizing it into our Language; to which I can only add my good Wishes, as I have done my Endeavours in this Publication; for its Usefulness must be judged of by the Event.*

In Examining Dolaeus *his Work, Many Things occurred to me not so agreeable to my Way of thinking about these Matters, as I could have wished consistent with my publishing thereof, without*

taking Notice of them; some necessary Things I apprehended to be omitted, some Appearances very odly accounted for, some Directions and Medicines too loosely and too generally recommended; and indeed, through the whole, too little Care taken of nicely distinguishing Constitutions and Habits, to which Directions of this Kind should be specifically adapted, and never applied but upon the most skillful and mature Advice that can be had. The too much Encouragement that hath been given to valetudinary People, by publishing such loose and undetermined Directions, have made them think themselves judges of many Things of great Consequence to their Lives and Health, for which they are in no Sort qualified, and is generally attended with many great and often fatal Inconveniencies: And because they don't always find Relief by applying to Physicians, from such Mischiefs as their own Errors, and the Neglect of timely Advice have brought upon them, they are apt to conceive a bad Opinion both of the Profession and its Professors.

The History of Cures, recited by Dolaeus, *I take to be the most valuable Part of his Book; the Appearances that happen therein, may, I think, be accounted for upon other and more philosophical Principles, than the Author hath adapted thereto; upon this, and the foregoing Accounts, I had determined to have added Notes at such particular Places as were proper for me to animadvert upon; but I found they swelled to too great a Bulk, and would have too much interrupted the Author in his own Way of telling his own Story; which occasioned the changing thereof into the Form they now appear in, of a preliminary Essay.*

The principal Hints in the Essay are taken from some loose Papers I have had long by me upon those Subjects; many of them were collected upwards of fifteen Years ago, when I was a very young Adventurer in Physick; so that I don't pretend to call them all my own, yet I have had long and frequent Occasion to see the Truth of them confirmed in many Instances, and the Pleasure to find them embraced and applied, by some of the greatest Masters of our Profession both at Home and Abroad. It is a great Loss to Observations of this Kind, that the Motions and Quantities of Matter are so far beyond our Senses, as to be incapable of being reduced to any certain Measures, which prevents that strict Mathematical Certainty we have arrived at in the Knowledge of the Properties of Motion in larger Bodies, more within the Compass of our Senses; the Gravitation of the heavenly Bodies, and of Bodies upon our Earth, to their respective Centres, have been reduced to certain Measure; and that there are mutual, attractive and repellent Powers, which act in certain Distances and Positions, annexed to the smallest Particles of Matter, as the immediate Cause of several natural Appearances, is highly resonable to believe; but whatever Boasts have been made by some of the modern Philosophers of accounting for those Appearances upon this Principle, they have amounted to no more than Evidences of its Existence; for the Laws of its Action are not yet sufficiently known for such Purposes as I have been speaking of; so that we must content ourselves with the History of Nature, in its Appearances, which under the same Circumstances will ever be the same, or at least as long as we shall have Occasion to observe them, let their Causes be what they will.

I have avoided the Quotation of Authors through the whole, as much as possible, because I have observed that whatever Appearance of honesty there may be in attributing to every Author the Hints he may have furnished, yet, a Multiplicity of Quotations is generally imputed rather to the Vanity of appearing Book learned, than any thing else, except to skreen Defects under greater Names, by the Publisher's not making himself by this Means accountable for what he says; the first I think I have disclaimed, by declining the Occasion, and the latter could be of no Use to me, because I hold myself accountable in this Publication only for the Truth of the Facts, and the Honesty of the Intention, which is to contribute what lies in my small Sphere to the good of Mankind, my Friends, and my Profession.

AN ESSAY UPON DIET, Applied chiefly to the GOUT

All Birds, Beasts, and Fishes, Insects, Trees, and other Vegetables, with their several Parts, grow out of Water and Watry Tinctures and Salts; and by Putrefaction return again into Watry Substances.

All the Parts of Animals and Vegetables are composed of Substances volatile and fixed, fluid and solid, as appears by their Analysis; and so are Salts and Minerals, so far as Chymists have been hitherto able to examine their Composition.

Sir Isaac Newton's Opt. p. 350, 360.

It is very well known in the History of Physick, that very great Changes have been brought about in the human Body by the Force of Diet, especially in chronical Cases, where the Application of Medicines hath proved ineffectual. Chronical Distempers, as they are longer in coming to their Period, so they occasion a more universal bad Habit of Body; and where there is a pretty universal Depravation either of the Solids or Fluids of a human Body, or of both, it is not to be expected that sudden Changes can happen to Advantage: As the Progress is slow, and the Changes from a good to a bad State imperceptible, and by Degrees, the Changes to a good State must be so too. In acute Diseases indeed Medicines are more immediately necessary, because the Changes being quick and violent, immediate and sometimes violent Remedies become necessary; there being no Time to wait the slow and ordinary, tho' more certain, Methods of Change by the Alimentary Powers.

The Gout, of all chronical Distempers, requires least the Application of violent or uncertain Remedies: Tho' its pain be very intense, it comes very slow to its Period: Generally it is many Years, or the imprudent Application of Medicines, that brings it into the noble Parts, so as to endanger Life; purging by the Bowels hath frequently brought it into the Stomach; external Applications of repellent Plaisters have drove it into the Head; Applications of Mercurial Plaisters have brought on Paralytick Disorders: As we are not certainly acquainted with the particular Nature of the Gouty Matter, it is uncertain how to apply. That there is somewhat in the Part, not natural to the Body, which occasions the Pain, we know; what it is particularly we know not; the common Method of Nature is to evacuate it by the Pores of the Skin at certain Seasons, which requires the Part to be kept warm, and to attend upon the Operations of Nature for Relief; this, and the Uncertainty of Medicinal Applications, have brought *Patience and Flannel* to be Proverbial to the Gout.

Since the Cure of the Gout doth not with Safety admit the Application of sudden or violent Remedies, nor the Nature thereof require them; Physicians have, with very great Prudence, turned their Thoughts to other Methods of Cure; for this End, it was very proper to consider the Gout as the Distemper of the Rich and the Lazy, that it flows chiefly from Idleness and Fulness of Bread; that Persons afflicted therewith have naturally keen Appetites, and are apt to indulge in larger Quantities and cruder Kinds of Food, than the digestive Powers are able to deal with; that it chiefly happens to sedentary People; that upon the Approach of a Fit of the Gout, and during the Paroxysm, there are evident Marks of Indigestion in the Stomach and Bowels. If we add hereto the actual Relief that many Persons have found in the Use of a proper Diet, we shall not be at a Loss for a Reason, why

Physicians should expect to find a more certain and easy Method of Cure in the Gout by Diet, than by any other Means.

It is not my Design at present to enter into the particular History of the Gout; this is very well known, and so accurately described by Dr. *Sydenham*, that it is needless; nor to enter into any long Detail of the History of the Alimentary Powers; this is likewise sufficiently known; nor to raise any Altercations about the particular Quality of the Gouty Matter, which is unknown, neither would the Knowledge thereof be much to my present Purpose. It will suffice to examine with Accuracy the Nature of Animal and Vegetable Diet, and the Habits they produce in the human Body, and to apply this to the Nature and Symptoms of the Gout.

The Knowledge of the particular Quality of the Gouty Matter is not absolutely necessary to our present Purpose; it is sufficient if it be made to appear, that the whole Habit of the Body may be changed by Diet. An Animal is entirely composed of the Food it is nourished by, the first *Stamen*, or Principle of Life, is most exceedingly small; and all that it afterwards receives its Growth from, may properly enough be called its Food: In oviparous Animals, and the same happens in viviparous ones, (tho' it be not so much within the Compass of our Observation) the first Nourishment is the White of the Egg, a Fluid very analogous to the *Serum* of the Blood, and the Subject of the Encrease is originally so small as almost to escape the strictest Enquiry.

Many, if not most Authors, who have entered into the particular Quality of the Gouty Matter, have placed it in an acrimonious acid Salt, and upon that Scheme have gone into the Method of a Milk and Vegetable Diet for the Cure. The Cure upon this Scheme seems to me not very rational, because Milk and Vegetables in their natural State tend to Acidity; and the Chalky Substance of the Gout and Stone in the Bladder (which are pretty near akin) are soluble only by *Aqua fortis*, which is the strongest Acid. The Digestion of Animal Food, which is found to encourage, if not occasion the Gout, naturally tends to Alcalescence; and therefore there is more Reason to conclude the Gouty Matter to be Alkaline than Acid; but the Truth is, there are no evident Marks of either Acid or Alkali in the Animal Juices of an healthy Body, nor of any other Salt but Sea Salt, which is taken in with the Food, and as it is incapable of Change, passes thro' the Vessels of the Body. There is indeed an Acidity discoverable in the Bowels and lacteal Vessels, which is doubtless owing to the acid Food, for it doth not change its Nature, till it be thoroughly assimilated with the Blood in several Circulations; for even in the Chyle an Acid is sometimes discoverable: This Acid is lost in the Milk, which is but one Change farther, tho' even in this it is evident there is some Tendency that Way, because of its Disposition to turn sowre by standing. As there is doubtless Air in the Blood, there must be somewhat Nitrous, because there is no Air without Nitre, and Nitre is an Acid, but cannot come within Imagination of occasioning the Gout. That the Gout should consist in an Acid, and be curable by acessent Aliment, the Gouty Chalk dissolved only by Acids, and the Aliment that occasions it alkalescent, would be very strange. On the contrary, there is as strong Evidence that the Gouty Matter is not perfect Alkali, neither is there any such Thing in the Juices of an healthy Body; for tho' Animal Juices naturally tend to Alkalescence, they putrify before they arrive at that State, so as to be incapable of Circulation: The Disposition of Animal Juices this Way is so strong, that if they were not continually diluted by fresh Portions of Chyle, they would arrive at that putrescent Alkaline State that would destroy the Animal, as is evident in the Case of Animals starved to Death. Twenty Days Fasting will not diminish the Quantity of the Blood so much as a large Bleeding, and in some Kinds of Consumptions the Diminution of the Solids and Fluids is much greater than could happen by being starved; but in the Case before us, the Juices turning Alkaline and Corrosive affect the tender Fibres of the Brain, and the Animal dies feverish and delirious: On the contrary, People have lived above twenty four Days upon Water only, which can happen no otherwise than by diluting the Fluids, and consequently keeping them from this Alkaline State. In short, if the Juices of an Animal Body were either Acid or Alkaline, so as to cause an Ebullition by Mixture of their Opposites, they would burst the Vessels.

I shall consider Vegetable Substances with regard to Diet, in the first Place, because they are the Original Food of all Animals, who either immediately are nourished thereby, or else feed upon such Animals as are nourished by them.

Vegetables receive their Food from the Air and Earth, by means of several Recipient Vessels placed in the Root and Bark, (analogous to the Lacteals in Animals) conveyed and diluted by a sufficient Quantity of Water: This Food thus received, which I shall beg Leave to call Vegetable Chyle, is digested and assimilated in the Course of Circulation, through the Vessels of the Plant, till it is converted into Vegetable Substance, and is formed into the several differing Vegetable Juices, Gums, and Resins, that are peculiar to each Species of Plants. The Remainder, after the proper Separations, is evaporated thro' the Pores of the Skin and through the Leaves, in the Manner of Animal Transpiration. I content myself here with this short Hint of Vegetable Nutrition, because I have treated it more at large and expresly in another Place: It is more material at present to examine the several Juices which circulate in the Vessels of Vegetables, because, in regard to Diet, they will appear to be the Matter of Animal Nutrition; for the Vessels of Plants are no other than meer Earth bound or connected together with Oyl, by the Means of some very powerful Attraction: This Earth is undissoluble by the utmost Force of Fire, since after burning a Plant in the open Fire, we find it left entire.

The Chyle of Plants seems to be made up of whatever Parts in the Earth are soluble in Water, so as to be capable of being received into the Absorbent or Recipient Vessels of Plants, before taken Notice of; and consequently may consist of Salts, Oyls, Fumes of Minerals, Metals, and other fossil Bodies, the putrified Parts of Animals and Vegetables. In its first State it is, to be sure, very crude; but by the Structure and Fabrick of the Plant, and the various Vessels it is strained thro', it is changed, elaborated, secreted, and assimilated into the Substance of the Plant; whence it follows, that in Vegetables are contained Salts, Oyl, Water, and Earth, and probably Metals too, for the Ashes of Vegetables yield somewhat which the Load-Stone attracts.

This Juice, when it first enters the Root, is Earthy, Watry, Poor, and Acid, it is in the Form of a fine and subtle Water; the nearer it is to the Root, the more it retains of its proper Nature, the further it is from the Root, and the more Action it hath sustained it approaches nearer to a Vegetable Nature, as will appear by pursuing it a little further. In the Trunk and Branches it is further prepared, tho' even here it is Watry and Acid, as appears by tapping Trees at the proper Season: It is more concocted in the Bud, where the Leaves coming to be unfolded, serve as Lungs for the further Preparation of it in the Course of Circulation; in the Flower, Leaves and Parts of Generation, it is still further elaborated, and becomes in its utmost Perfection, fine enough to preserve and nourish the Embryo in the Seeds of Plants. This Nutritious Juice or Chyle is pretty universal, and is found in every Part of a Plant, but more or less in Quantity, and more or less impregnated with the more Elaborate Juices, according to the Number and Degree of its Circulations. It seems to be the universal Diluent and Conveyer of other and more elaborated Particles. Besides what I have mentioned, there are Juices particular to particular Parts of Plants; as Oyl, Wax, and Manna to the Leaves; Volatile Oyl or Spirit, and Honey to the Flower; a very fine Essential Oyl or Balm to the Seed, and that in great Quantity; Oyl, Balm, Pitch, Resin and Gum to the Bark: Besides which, there is a Juice peculiar to each Plant, and received in Vessels of its own, in which a good Deal of its Specifick Nature may consist, (for it is not reducible to any of those before mentioned) most of the *English* Authors call this the proper Juice of the Plant, but *Boerhave* and later Writers call it the Blood. I should digress too much to enter into the natural History of these several Parts of Vegetables; my Design at present reaching no further than with Respect to their Assimilation into Animal Substance; and therefore I refer to the Authors who have expresly treated of these Matters, and proceed to examine Vegetable Juices in another Light.

The Juices of Plants are Watry, Saline, Oily, Spirituous, Gummy, Balsamick, or Resinous, all discoverable by Art. The Water is generally found in the Absorbent Vessels of Plants, but mixed with

a Proportion of Salt, which, tho' always soluble in Water, otherwise appears of very different Nature in different Plants, and differs in Degree of Volatility.

The Oily Part is that which grows Fluid at the Fire, proves inflammable, and will not unite with Water, without the Intervention of Salt. It is seldom obtained pure from Vegetables, because therein it exerts so very strong an attractive Force upon Salt, Water, and Earth, that nothing less than the Force of Fire, assisted by the Action of the Air, can separate them, as appears in *Helmont's* Everlasting Coal.

The Spirituous Parts of Plants, or those which contain the Odour and Taste, are very volatile, will mix with Water, and sometimes burn in the Fire, the Oyl of the Vegetable being here greatly attenuated, broke, and subtilized; as appears by its being exhalable by the Heat of the Summer Sun, so as to form the particular Atmosphere of the Plant, and fill the Air with Particles that affect our Senses even at some Distance.

Gums are such Productions of Vegetables, as will mix with Water, dissolve over the Fire, and burn away, being tough viscid Substances, and contain a large Proportion of the Oyl and Salt of the Plant. Balsams are native Oyl of Vegetables, brought to a thick Consistence, but containing a large Proportion of an acid Spirit and Salt: However, they differ greatly from the Oyls they afford. Lastly, Resins are such Productions of Vegetables, as being hard and dry, prove brittle in the Cold, soluble by Heat, inflammable and misceable with Oyl, but not with Water.

It would be endless to give an Account of the particular Qualities of the proper Juices of Plants; since these differ in different Plants, and many Times in different Parts of the same Plant. There is a much greater Variety in Vegetable than in Animal Nature; and a much greater Difference in the Juices of one than of the other; for the Number of different Plants known and used very much exceeds the Number of different Animals known and used; and particular Plants have greater Variety of Juices than particular Animals; whose Juices (if I may so speak) are more homogenial than those of Plants. This will appear more evidently by comparing what hath been here said, with the Consideration of Animal Substances with Regard to Diet.

I have hitherto considered Vegetables in their natural State, but before we can apply what hath been laid down to Animal Diet, we must consider some Changes many of them undergo, before they are used. The Chief of these happens by Fermentation, the Effects of which upon Vegetables deserve to be considered; since Bread, Wine, and Malt Liquors, so great a Part of our common Food, are prepared from Vegetables that have gone thro' this Operation, or are mixed with Ferments in their Preparation.

Fermentation is a Change in Vegetables by Means of some intestine Motion, the Effect whereof is, that in Distillation there arises a volatile inflammable Liquor, capable of mixing with Water, commonly called Spirits; or if the Fermentation be so managed as to produce Vinegar, thence arises in Distillation a watry, thin, acid Liquor, capable of extinguishing Fire. I have here only mentioned the Effects of Fermentation; what this intestine Motion is, or its Cause, I do not pretend to describe, because I do not know it: Its Effects are very well known to be either a vinous or an acetous Liquor, and they are producible from all Vegetables, and from Vegetables only; for all the Art yet known will never gain such Spirits either from Fossils or Animals: Putrefaction, Digestion, and Effervescence are all done by intestine Motions, but will neither produce Wine nor Vinegar; so that in this Light Fermentation is confined to Vegetables.

It needs no very deep Enquiry into the History of Fermentation, to know, that in Wine (by which Name I understand all fermented Vegetable Liquor, Ale, Beer, Mead, and all artificial Wines, as well as that made from the Grape) the Spirituous Parts of the Vegetable are so volatilized and loosened, that very small Heat raises them from the other Parts of the Liquor, even many fly off upon being exposed to the Air: The viscid, oily, and glutinous Parts of Vegetables are so broke and separated, and the Spheres of their mutual Attractions so diversified, that they are no longer retained. Before Fermentation, the longer you boil the Decoction of any Vegetable, its oily and spirituous Parts

are more concentrated, and little besides Water, and some essential Oyl goes away; after Fermentation the Spirit goes away, and the Water remains: This is commonly known to Brewers and Distillers.

What is next observable in this Change is, that the essential Salt is thrown from the Body of the Liquor thus fermented, and adheres to the Side of the Vessel wherein the Liquor is deposited, and crystallizes into Tartar. In Vinegar this Salt is kept in the Mass of the Fluid (the Oyl being thrown off) where uniting with the aqueous and spirituous Parts, it turns sowre, and becomes Vinegar by Means of that Fermentation. After this no Tartar can be generated from it, nor any inflammable Spirit obtained; but on the contrary, a watry, poor, acid Liquor, capable of extinguishing Fire, rises first from the Still. In Wine, the volatile Salt and Oyl of the Vegetable are attenuated and reduced into one Spirit; Vinegar is the essential Salt of Wine made more acid by a new Fermentation, and intimately mixed with the watry and spirituous Parts of the same.

The Spirit produced from the Distillation of Wine is a Liquor of such active Parts, and capable of effecting such Changes in animal Bodies, that it ought to be retained entirely to Medicine; but since it is too much used in Diet, it may be proper to remember it under that Head.

I must take Notice of one other Change in Vegetables, and that is what they undergo by Putrefaction, because it Approaches somewhat to animal Digestion, and gives us some Sort of Notion of the Manner of converting vegetable into animal Substances.

It is very well known, that if a Quantity of green recent Vegetables be heaped up together, and pressed down, they will in a little Time begin to heat in the Middle, and in the Course of eight or ten Days will have passed by Degrees to a violent Heat, so as sometimes to flame and burn away; this Mass acquires a putrid, cadaverous, feculent Taste and Smell, and turns into a soft, pappy Substance, resembling human Excrement in Scent, and putrified Flesh in Taste; and by all the Tryals that can be made, gives us no mark of vegetable Substance, but is entirely turned into an animal one: For upon Distillation it yields a Water of an urinous Scent; a white, volatile, dry, alkaline Salt; a volatile, alkaline, oily Salt; and a thick fetid Oyl, all the same that are producible from animal Substances; and lastly, (which is the nicest Criterion between vegetable and animal Substances) if the Remainder be calcined in an open Fire, it will not yield the least Particle of fixed Salt, which all Vegetables whatsoever are known to do.

All Vegetables whatever are subject to this Putrefaction (and indeed Animals too) and all specifick Differences are destroyed by it: It is evidently caused by Fire itself collected or included within the subject; and seems to be a general Law of Nature, wisely established, to produce wonderful Changes in the World, and to prevent the Indolence of Matter; this active Principle or Medium giving an easy and reciprocal Transition of vegetable into animal Substances, and of animal into vegetable. I think it cannot be out of the Way here to observe, that the Change which the Aliment suffers in the human Body, is in some Measure reducible to this; for if a Man should live entirely upon acid Vegetables, acid Bread, and Fruits, drink Rhenish Wine, no Part of his Body or Juices would, upon Distillation, or other Tryal, yield the least Portion of an acid or fixed Salt, but constantly a volatile Alkali. There cannot indeed be supposed any perfect Putrefaction in the Bodies of Animals; for so soon as any Thing contained therein tends this Way, it is discharged as Excrement; all the Acids of the Aliment are subdued by the vital Powers of Animals, and converted into volatile Salts of an alkaline Nature; without an actual or real Putrefaction, yet by an Operation nearly approaching thereto: If these Salts were not discharged, before Putrefaction (as by examining the Excrement it appears they are) they must produce such terrible Effects as would immediately destroy the Animal.

In examining vegetable Substances as Food, we must consider them as eaten Raw, as prepared by the Arts of Cookery, and as subjected to Fermentation. In the first Case they are sometimes the Food of Men, always of Animals that we feed upon; in the others the Food of Men alone.

Raw Vegetables that become Parts of Animals, are bruised, ground, and comminuted by the proper animal Organs, and mixed with animal Juices in their Passage. By this Means their Juices are expressed; such of them as are capable of mixing with Water naturally, or by the intermediate

Assistance of the Bile, are formed into one common fluid Mass or Chyle, which constitutes the first Nourishment of Animals; whence the Blood, Serum, Lymph, and other animal Juices are formed. From what was said before, this appears to be the Water, impregnated with the essential Salt, the Spirit, some Portion of its essential Oyls, mixed with the Water by Means of the Salt and the Bile; these by the vital Powers are formed into a white Liquor, which is the Chyle, not unfitly represented in the common making of Emulsions from oily Seeds. The Chyle still retains its vegetable Nature, and somewhat specifick to the Vegetable it came from; but when it hath been circulated several Times thro' the Body, and thoroughly mixed with the Juices thereof, it acquires animal Properties; vegetable and animal Juices are pretty near of the same specifick Gravity, and consequently fit to repair each other; the different Impulses of Heat and Motion, with due Mixture, create the Difference; though this will always hold true, that an animal Body constantly repaired from vegetable Juices, cannot have so strong a tendency to a putrescent alkaline State, as a Body constantly repaired from animal Juices, already disposed to that State.

The common Effects of the Art of Cookery upon Vegetables, will be understood by what happens in the Decoction of Plants. In boiling any Plant, its most sublime fluid Part flies off, and indeed it is incapable of bearing a greater Heat than that of the Summer Sun, the Salts of the Plant are dissolved in the Water, and its thicker and grosser Oyl rises to the Top, like a fat Scum; so long as the Plant retains any Taste or Odour, change the Water as often as you please, there will constantly arise a fat, odorous, viscous, inflammable and frothy Matter, which can be no other than the Oyl of the Plant loosened from the Salts. In Proportion then, as the Salts are dissolved in the boiling Water, the Oyl attenuated, as it must be before it can be so far specifically lighter as to arise to the Top, we are to judge how far the Art of Cookery is serviceable in the Preparation of vegetable Diet.

From what was said before in relation to Fermentation, it is plain that the vegetable Oyls are much volatilized, rendred more active, and separated from the Salts; upon this Account it is, that they are endowed with an inebriating Quality, which is confined entirely to Wines, for no other Substance hath that Quality. No one was ever drunk with eating Grapes, or drinking Must or Wort before Fermentation. The stupifying Quality of Poppy, Henbane, Mandrakes, Nightshade, and other Plants of that Class, is very different from the Effects of Wine or its Spirit. The chief Effect of Fermentation, in Regard to Diet, is supposed to consist in rendring vegetable Substance less difficult to be overcome by the Action of animal Organs and Mixtures, and easier to the digestive Powers; but there are other good Effects not so commonly thought of; fermented vegetable Substance is very little subject to Putrefaction, and is a great Preservative against it. By the styptick Power that the Spirit is endowed with, the Tone of the Fibres is increased in Digestion, their Force enlarged, and consequently their Action greater upon the vegetable Parts, and a larger Quantity of animal Juices mixed with them; and it is no difficult Matter to imagine, that the inward Heat of an human Body should draw forth the Spirit of fermented Liquors.

The Parts of Vegetables most used in Food, are the Seeds of Plants, our common Bread and Drink being made from them: These, by what was said before, contain the most elaborated Juices, the greatest Quantity of fine Oyl and Spirit, and are consequently most fit for Nourishment; several Fruits are eaten Raw, because their Juices are concocted to the utmost Degree of Perfection, and contain, in greatest Quantity, the finest and most elaborated vegetable Oyl, mixed with the essential Salts peculiar to each, which would be lost in Decoction: But the coarser Parts of Vegetables, as Roots, Leaves, Stalks, unripe Fruits, and Flowers, require the Arts of Cookery to be exercised upon them, to render them more easily subject to the animal Powers, and assimilable to their Juices.

I design not to enter into the several specifick Differences of Vegetables, I hope I have said enough to explain their general Nature, and how they become reducible into animal Substances; I shall next consider these Substances in the same Manner.

By all the Tryals yet made upon animal Substances, they are resoluble into the same Parts with Vegetables, only differently modified; that is, as we saw before, Water, Earth, Salt and Oyl, the

specifick Spirit being no other than Water impregnated with the specifick and highest rectified Oyl and Salt, the Water and Earth in both are individually the same; and though there be good Reason to imagine, that there is originally but one Oyl in Nature, and that the fixt Salt of Vegetables, and the volatile Salt of Animals, may be originally the same, since transmutable into one another; yet it is necessary to examine these two Principles in animal Substances, that by comparing them with what we before discovered in Vegetables, we may have some Notion of their Differences with Regard to their Use in Diet.

The great Excess of animal Heat and Motion, beyond what is necessary to Vegetables, the stronger and quicker Circulation of their Juices, necessarily require and occasion that the Oyls and Salts in animal Bodies should be differently modified from what they are in Vegetables. No Motion is performed in Animals without some Portion of Oyl, and perhaps Water too, to lubricate the Parts, and keep them supple; the Attrition would cause great Mischief, make the Motion uneasy, wear away and burn up the Parts, if they were not softned and moistned by an oily Fluid; and accordingly we find all the Muscles, Tendons, Joints and other Parts employ'd in Motion, to have Repositories of this Oyl placed about them, and that so artificially, that the Very Motion occasions the Diffusion of this Oyl upon them. There is an innate Principle of Heat or Fire, that attends the vital Powers, that may very well occasion the Change and Volatilization of Salts in animal Substances, in the same Manner as was before observed in the Putrefaction of Vegetables.

Animal Oyls differ according to the Principles inherent in them, for when freed from Earth and Salts (which is very difficult by Reason of their mutual Attractions under certain Circumstances) they appear to be simple and unactive, and the same in all animal Bodies.

By this Account then we are principally to regard the different Quantities and Degree of Volatility in these Salts, and the Degree of Consistence or Impregnation of animal Oyls with them. It must be observed, that the Salts in the Bodies of living Animals are not perfectly the same they appear to be, when extracted thence by chymical Resolutions; a great Alteration is made by the Fire, and a good deal by the Tendency all animal Substances have to Putrefaction, upon a Stagnation of their fluid Parts: Even in the Evaporation of human Blood (fresh drawn) by a gentle Fire, this Salt, though not perfectly fixed, will not rise, but only the Spirit: These Salts are of a mild attenuating Nature in healthy Bodies, whose vital Powers are sufficient to subdue the Substances they feed upon: But in such as have not that vital Power in that Degree, or commit Errors in Diet, where these Salts are not sufficiently attenuated, or the first Digestion stronger than the concoctive Powers or the Discharges, these Salts acquire Properties productive of many acute and chronical Diseases; (not within the Compass of this Enquiry) these may be prevented, and sometimes cured, by a strict Application to Diet, proper to correct the different Modifications of these Oyls and Salts.

Конец ознакомительного фрагмента.