

Edmund Burke

A Philosophical Enquiry into the Origin of our Ideas Of the Sublime and Beautiful (1756, 2nd edition, 1759)

PART IV.

I. Of the efficient cause of the SUBLIME and BEAUTIFUL.

WHEN I say, I intend to enquire into the efficient cause of sublimity and beauty, I would not be understood to say that I can come to the ultimate cause. I do not pretend that I shall ever be able to explain, why certain affections of the body produce such a distinct emotion of mind, and no other; or why the body is at all affected by the mind, or the mind by the body. A little thought will shew this to be impossible. But I conceive, if we can discover what affections of the mind produce certain emotions of the body; and what distinct feelings and qualities of body shall produce certain determinate passions in the mind, and no others, I fancy a great deal will be done; something not unuseful towards a distinct knowledge of our passions, so far at least as we have them at present under our consideration. This is all, I believe, we can do. If we could advance a step farther, difficulties would still remain, as we should be still equally distant from the first cause. When Newton first discovered the property of attraction, and settled its laws, he found it served very well to explain several of the most remarkable phænomena in nature; but yet with reference to the general system of things, he could consider attraction but as an effect, whose cause at that time he did not attempt to trace. But when he afterwards began to account for it by a subtle elastic æther, this great man (if in so great a man it be not impious to discover any thing like a blemish) seemed to have quitted his usual cautious manner of philosophising; since, perhaps, allowing all that has been advanced on this subject to be sufficiently proved, I think it leaves us with as many difficulties as it found us. That great chain of causes, which linking one to another even to the throne of God himself, can never be unravelled by any industry of ours. When we go but one step beyond the immediately sensible qualities of things, we go out of our depth. All we do after, is but a faint struggle, that shews we are in an element, that does not belong to us. So that when I speak of cause, and efficient cause, I only mean, certain affections of the mind, that cause certain changes in the body; or certain powers and properties in bodies, that work a change in the mind. As if I were to explain the motion of a body falling to the ground, I would say it was caused by gravity, and I would endeavour to shew after what manner this power operated, without attempting to shew why it operated in this manner; or if I were to explain the effects of bodies striking one another by the common laws of percussion, I should not endeavour to explain how motion itself is communicated.

II. ASSOCIATION.

IT is no small bar in the way of our enquiries into the causes of the passions, that the occasion of many of them are given, and that their governing motions are impressed at a time when we have not capacity to reflect on them; at a time of which all sorts of memory is worn out of our minds. For besides such things as affect us in various manners according to their natural powers, there are associations made at that early season, which we find it very hard afterwards to distinguish from natural effects. Not to mention the unaccountable antipathies which we find in many persons, we all find it

impossible to remember when a steep became more terrible than a plain; or fire or water more dreadful than a clod of earth; though all these are very probably either conclusions from experience, or arising from the premonitions of others; and some of them impressed, in all likelihood, pretty late. But as it must be allowed that many things affect us after a certain manner, not by any natural powers they have for that purpose, but by association; so it would be absurd on the other hand, to say that nothing affects us otherwise; since some things must have been originally and naturally agreeable or disagreeable, from which the others derive their associated powers; and it would be, I fancy, to little purpose to look for the causes of our passions in association, until we fail of them in the natural properties of things.

III. Cause of PAIN and FEAR.

I Have before observed, 18 that whatever is qualified to cause terror, is a foundation capable of the sublime; to which I add, that not only these, but many things from which we cannot probably apprehend any danger have a similar effect, because they operate in a similar manner. I observed too, that 19 whatever produces pleasure, positive and original pleasure, is fit to have beauty engrafted on it. Therefore, to clear up the nature of these qualities, it may be necessary to explain the nature of pain and pleasure on which they depend. A man who suffers under violent bodily pain; (I suppose the most violent, because the effect may be the more obvious.) I say a man in pain has his teeth set, his eyebrows are violently contracted, his forehead is wrinkled, his eyes are dragged inwards, and rolled with great vehemence, his hair stands an end, the voice is forced out in short shrieks and groans, and the whole fabric totters. Fear or terror, which is an apprehension of pain or death, exhibits exactly the same effects, approaching in violence to those just mentioned in proportion to the nearness of the cause, and the weakness of the subject. This is not only so in the human species, but I have more than once observed in dogs, under an apprehension of punishment, that they have writhed their bodies, and yelped, and howled, as if they had actually felt the blows. From hence I conclude that pain, and fear, act upon the the same parts of the body, and in the same manner, though somewhat differing in degree. That pain and fear consist in an unnatural tension of the nerves; that this is sometimes accompanied with an unnatural strength, which sometimes suddenly changes into an extraordinary weakness; that these effects often come on alternately, and sometimes mixed with each other. This is the nature of all convulsive agitations, especially in weaker subjects, which are the most liable to the severest impressions of pain and fear. The only difference between pain and terror, is, that things which cause pain operate on the mind, by the intervention of the body; whereas things that cause terror generally affect the bodily organs by the operation of the mind suggesting the danger; but both agreeing, either primarily, or secondarily, in producing a tension, contraction, or violent emotion of the nerves. They agree likewise in every thing else; for it appears very clearly to me, from this, as well as from many other examples, that when the body is disposed, by any means whatsoever, to such emotions, as it would acquire by the means of a certain passion; it will of itself excite something very like that passion in the mind.

IV. Continued.

TO this purpose Mr. Spon, in the Recherches d' Antiquite, gives us a curious story of the celebrated physiognomist Campanella; this man, it seems, had not only made very accurate observations on human faces, but was very expert in mimicking such, as were

any way remarkable. When he had a mind to penetrate into the inclinations of those he had to deal with, he composed his face, his gesture, and his whole body, as nearly as he could into the exact similitude of the person he intended to examine; and then carefully observed what turn of mind he seemed to acquire by this change. So that, says my author, he was able to enter into the dispositions and thoughts of people, as effectually as if he had been changed into the very men. I have often observed, that on mimicking the looks and gestures, of angry, or placid, or frightened, or daring men, I have involuntarily found my mind turned to that passion whose appearance I endeavoured to imitate; nay, I am convinced it is hard to avoid it; though one strove to separate the passion from its correspondent gestures. Our minds and bodies are so closely and intimately connected, that one is incapable of pain or pleasure without the other. Campanella, of whom we have been speaking, could so abstract his attention from any sufferings of his body, that he was able to endure the rack itself without much pain; and in lesser pains, every body must have observed, that when we can employ our attention on any thing else, the pain has been for a time suspended; on the other hand, if by any means the body is indisposed to perform such gestures, or to be stimulated into such emotions as any passion usually produces in it; that passion itself never can arise, though its cause should be never so strongly in action; though it should be merely mental, and immediately affecting none of the senses. As an opiate, or spirituous liquors shall suspend the operation of grief, or fear, or anger, in spite of all our efforts to the contrary, and this by inducing in the body a disposition contrary to that which it receives from these passions.

V. How the Sublime is produced.

HAVING considered terror as producing an unnatural tension and certain violent emotions of the nerves; it easily follows, from what we have just said, that whatever is fitted to produce such a tension, must be productive of a passion similar to terror²¹, and consequently must be a source of the sublime, though it should have no idea of danger connected with it. So that little remains towards shewing the cause of the sublime, but to shew that the instances we gave of it, in the second part, are of such things, as are fitted by nature to produce this sort of tension, either by the primary operation of the mind or the body. With regard to such things as affect by the associated idea of danger, there can be no doubt but that they produce terror, and act by some modification of that passion; and that terror, when sufficiently violent, raises the emotions of the body just mentioned, can as little be doubted. But if the sublime is built on terror, or some passion like it, which has pain for its object; it is previously proper to enquire how any species of delight can be derived from a cause so apparently contrary to it. I say, delight, because, as I have often remarked, it is very evidently different in its cause, and in its own nature, from actual and positive pleasure.

VI. How pain can be a cause of delight.

PROVIDENCE has so ordered it, that a state of rest and inaction, however it may flatter some principle of indolence in us, should be productive of many inconveniencies; that it should generate such disorders, as may force us to have recourse to some labour, as a thing absolutely requisite to make us pass our lives with tolerable satisfaction for the nature of rest is to suffer all the parts of our bodies to fall into such a relaxation, as not only disables the members from performing their functions, but takes away that vigour which is requisite towards the performing the natural and necessary secretions. At the same time, that in this languid inactive state, the nerves are more liable to the most

horrid convulsions, than when they are sufficiently braced and strengthened. Melancholy, dejection, despair, and often self-murder, is the consequence of the gloomy view we take of things in this relaxed state of body. The best remedy for all these evils is exercise or labour; and labour is a surmounting of difficulties, an exertion of the contracting power of the muscles; and as such resembles pain, which consists in tension or contraction, in every thing but degree. Labour is not only requisite to preserve the coarser organs in a state fit for their functions, but it is equally necessary to these finer and more delicate organs, on which, and by which, the imagination, and perhaps the other mental powers, act. Since it is probable, that not only the inferior parts of the soul, as the passions are called, but the understanding itself makes use of some fine corporeal instruments in its operations; though what they are, and where they are, may be somewhat hard to settle: but that it does make use of such, appears from hence; that a long exercise of the mental powers induces a remarkable lassitude of the whole body; and on the other hand, that great bodily labour, or pain, weakens, and sometimes actually destroys the mental faculties. Now, as a due exercise is essential to the coarse muscular parts of the constitution, and that without this rousing they would become languid, and diseased, and clogged with heterogeneous and hurtful matter; the very same rule holds with regard to the former; to have them in proper order, they must be shaken and worked to a proper degree.

VII. EXERCISE necessary for the finer organs.

AS common labour, which is a mode of pain, is the exercise of the grosser, a mode of terror is the exercise of the finer parts of the system; and if a certain mode of pain is of such a nature as to act upon the eye or the ear, as they are the most delicate organs, it approaches more nearly to that which has a mental cause. In all these cases, if the pain and terror are so modified as not to be actually noxious; if the pain is not carried to violence, and the terror is not conversant about the present destruction of the person, as these emotions clear the parts, whether fine, or gross, of a dangerous and troublesome incumbrance, they are capable of producing delight; not pleasure, but a sort of delightful horror, a sort of tranquility tinged with terror; which as it belongs to self-preservation is one of the strongest of all the passions. Its object is the sublime. Its highest degree I call astonishment; the subordinate degrees are awe, reverence, and respect, which by the very etymology of the words shew from what source they are derived, and how they stand distinguished from positive pleasure.

VIII. Why things not dangerous produce passion like TERROR.

A Mode of terror, or of pain, is always the cause of the sublime. For terror, or associated danger, the foregoing explication is, I believe, sufficient. It will require something more trouble to shew, that such examples, as I have given of the sublime in the second part, are capable of producing a mode of pain, and of being thus allied to terror, and to be accounted for on the same principles. And first of such objects as are great in their dimensions. I speak of visual objects.

IX. Why visual objects of great dimensions are Sublime.

VISION is performed by having a picture formed by the rays of light which are reflected from the object, painted in one piece, instantaneously, on the retina, or last nervous part of the eye. Or, according to others, there is but one point of any object painted on the eye in such a manner as to be perceived at once; but by moving the eye, we gather up with great celerity, the several parts of the object, so as to form one

uniform piece. If the former opinion be allowed, it will be considered, that a body of great dimensions, though all the light reflected from it should strike the eye in one instant; yet with regard to its extent we must suppose it formed of a vast number of distinct points, every one of which, or the ray from every one, makes an impression on the retina. So that, though the image of one point should cause but a small tension of this membrane, another, and another, and another stroke, must in their progress cause a very great one, until it arrives at last to the highest degree; and the whole capacity of the eye, vibrating in all its parts must approach near to the nature of what causes pain, and consequently must produce an idea of the sublime. Or if we take it, that one point only of an object is distinguishable at once; the matter will amount nearly to the same thing, or rather it will make the origin of the sublime from greatness of dimension yet clearer. For if but one point is observed at once, the eye must traverse the vast space of such bodies with great quickness, and consequently the fine nerves and muscles destined to the motion of that part must be very much strained; and their great sensibility must make them the more affected by it. Besides, it signifies just nothing to the effect produced, whether a body has its parts connected and makes its impression at once; or making but one impression of a point at a time, it causes a succession of the same, or others, so quickly, as to make them seem united; as is evident from the common effect of whirling about a lighted torch or piece of wood; which if done with celerity, seems a circle of fire.

X. UNITY why requisite to vastness.

IT may be objected to this theory, that the eye generally receives an equal number of rays at all times, and that therefore a great object cannot affect it by the number of rays, more than that variety of objects which the eye must always discern whilst it remains open. But to this I answer, that admitting an equal number of rays, or an equal quantity of luminous particles to strike the eye at all times, yet if these rays frequently vary their nature, now to blue, now to red, and so on, or their manner of termination as to a number of petty squares, triangles, or the like, at every change, whether of colour or shape, the organ has a sort of relaxation or rest, which prevents that tension, that species of labour which is allied to pain, and causes the sublime. For the sum total of things of various kinds, though it should equal the number of the uniform parts composing some one entire object, is not equal in its effect upon the organs of our bodies. It is next to rest in all things, to vary our labour; and it is not so only in our labours, but in our studies. Besides this, there is a very strong reason for the difference. The mind in reality hardly ever can attend diligently to more than one thing at a time; if this thing be little, the effect is little, and a number of other little objects cannot engage the attention; the mind is bounded by the bounds of the object; and what is not attended to, and what does not exist, are much the same in the effect; but the eye or the mind (for in this case there is no difference) in great uniform objects does not readily arrive at their bounds; it has no rest, whilst it contemplates them; the image is much the same every where. So that every thing great by its quantity must necessarily be, one, simple and entire.

XI. The artificial INFINITE.

WE have observed, that a species of greatness arises from the artificial infinite; and that this consists in an uniform succession of great parts: we observed too, that the same uniform succession had a like power in sounds. But because the effects of many things are clearer in one of the senses than in another, and that they all bear an analogy to, and

illustrate one another; I shall begin with this power in sounds, as the cause of the sublimity from succession is rather more obvious in the sense of hearing. And I shall here once for all observe, that an investigation of the natural and mechanical causes of our passions, besides the curiosity of the subject, gives, if they are discovered, a double strength and lustre to any rules we deliver on such matters. When the ear receives any simple found, it is struck by a single pulse of the air, which makes the ear-drum and the other membranous parts vibrate according to the nature and species of the stroke. If the stroke be strong, the organ of hearing suffers a considerable degree of tension. If the stroke be repeated pretty soon after; the repetition causes an expectation of another stroke. And it must be observed, that expectation itself causes a tension. This is apparent in many animals, who, when they prepare for hearing any sound, rouse themselves, and prick up their ears; so that here the effect of the sounds is considerably augmented by a new auxiliary, the expectation. But though after a number of strokes, we expect still more, not being able to ascertain the exact time of their arrival, when they arrive, they produce a sort of surprise, which increases this tension yet further. For, I have observed, that when at any time I have waited very earnestly for some sound, that returned at intervals, (as the successive firing of cannon) though I fully expected the return of the sound, when it came, it always made me start a little; the eardrum suffered a convulsion, and the whole body consented with it. The tension of the part thus increasing at every blow, by the united forces of the stroke itself, the expectation, and the surprise, it is worked up to such a pitch as to be capable of the sublime; it is brought just to the verge of pain. Even when the cause has ceased; the organs of hearing being often successively struck in a similar manner, continue to vibrate in that manner for some time longer; this is an additional help to the greatness of the effect.

XII. The vibrations must be similar.

BUT if the vibration be not similar at every impression, it can never be carried beyond the number of actual impressions; for move any body, as a pendulum, in one way, and it will continue to oscillate in an arch of the same circle, until the known causes make it rest; but it after first putting it in motion in one direction, you push it into another, it can never reassume the first direction; because it can never move itself, and consequently it can have but the effect of that last motion; whereas, if in the same direction you act upon it several times, it will describe a greater arch, and move a longer time.

XIII. The effects of SUCCESSION in visual objects explained.

IF we can comprehend clearly how things operate upon one of our senses; there can be very little difficulty in conceiving in what manner they affect the rest. To say a great deal therefore upon the corresponding affections of every sense, would tend rather to fatigue us by an useless repetition, than to throw any new light upon the subject, by that ample and diffuse manner of treating it; but as in this discourse we chiefly attach ourselves to the sublime, as it affects the eye, we shall consider particularly why a successive disposition of uniform parts in the same right line should be sublime, 25 and upon what principle it is enabled to make a comparatively small quantity of matter so disposed produce a grander effect, than a much larger quantity disposed in another manner. To avoid the perplexity of general notions; let us set before our eyes a colonnade of uniform pillars planted in a right line; let us take our stand, in such a manner, that the eye may shoot along this colonnade, for it has its best effect

in this view. In our present situation it is plain, that the rays from the first round pillar will cause in the eye a vibration of that species; an image of the pillar itself. The pillar immediately succeeding increases it; that which follows renews and enforces the impression; each in its order as it succeeds, repeats impulse after impulse, and stroke after stroke, until the eye long exercised in one particular way cannot lose that object immediately; and being violently roused by this continued agitation, it presents the mind with a grand or sublime conception. But instead of viewing a rank of uniform pillars; let us suppose, that they succeed each other, a round and a square one alternately. In this case the vibration caused by the first round pillar perishes as soon as it is formed; and one of quite another sort (the square) directly occupies its place; which however it resigns as quickly to the round one; and thus the eye proceeds, alternately, taking up one image and laying down another, as long as the building continues. From whence it is obvious, that at the last pillar, the impression is as far from continuing as it was at the very first; because in fact, the sensory can receive no distinct impression but from the last; and it can never of itself resume a dissimilar impression: besides, every variation of the object is a rest and relaxation to the organs of sight; and these reliefs prevent that violent emotion so necessary to produce the sublime. To produce therefore a perfect grandeur in such things as we have been mentioning, there should be a perfect simplicity, an absolute uniformity in disposition, shape and colouring. Upon this principle of succession and uniformity it may be asked, why a long bare wall should not be a more sublime object than a colonnade; since the succession is no way interrupted; since the eye meets no check; since nothing more uniform can be conceived? A long bare wall is certainly not so grand an object as a colonnade of the same length and height. It is not altogether difficult to account for this difference. When we look at a naked wall, from the evenness of the object, the eye runs along its whole space, and arrives quickly at its termination; the eye meets nothing which may interrupt its progress; but then it meets nothing which may detain it a proper time to produce a very great and lasting effect. The view of a bare wall, if it be of a great height and length, is undoubtedly grand: but this is only one idea, and not a repetition of similar ideas; it is therefore great, not so much upon the principle of infinity, as upon that of vastness. But we are not so powerfully affected with any one impulse, unless it be one of a prodigious force, as we are with a succession of similar impulses; because the nerves of the sensory do not (if I may use the expression) acquire a habit of repeating the same feeling in such a manner as to continue it longer than its cause is in action; besides, all the effects which I have attributed to expectation and surprise in sect. 11. can have no place in a bare wall.

XIV. Locke's opinion concerning darkness, considered.

IT is Mr. Locke's opinion, that darkness is not naturally an idea of terror; and that, though an excessive light is painful to the sense, that the greatest excess of darkness is no ways troublesome. He observes indeed in another place, that a nurse or an old woman having once associated the ideas of ghosts and goblins with that of darkness; night ever after becomes painful and horrible to the imagination. The authority of this great man is doubtless as great, as that of any man can be, and it seems to stand in the way of our general principle [Part II, sect. 3]. We have considered darkness as a cause of the sublime; and we have all along considered the sublime as depending on some modification of pain or terror; so that, if darkness be no way painful or terrible to any, who have not had their minds early tainted with superstitions, it can be no source of the sublime to them. But with all deference to such an authority; it seems to me, that an association of a more general nature; an association which takes in all mankind may

make darkness terrible; for in utter darkness, it is impossible to know in what degree of safety we stand; we are ignorant of the objects that surround us; we may every moment strike against some dangerous obstruction; we may fall down a precipice the first step we take; and if any enemy approach, we know not in what quarter to defend ourselves; in such a case strength is no sure protection; wisdom can only act by guess; the boldest are staggered, and he who would pray for nothing else towards his defence, is forced to pray for light.

Ζευ πάτερ, αλλα συ ρυσαι απ' ηερης υιας Αχαιων

Ποιησον δ' αιθρην, δος δ' οφθαλμοισιν ιδεασ·

Εν δε φαι κ' ολεων. —————

As to the association of ghosts and goblins; surely it is more natural to think, that darkness being originally an idea of terror, was chosen as a fit sence for such terrible representations, than that such representations have made darkness terrible. The mind of man very easily slides into an error of the former sort; but it is very hard to imagine, that an idea so universally terrible in all times, and in all countries, as darkness has been, could possibly have been owing to a set of idle stories, or to any cause of a nature so trivial, and of an operation so precarious.

XV. DARKNESS terrible by its own nature.

PERHAPS it may appear on enquiry, that blackness and darkness are in some degree painful by their natural operation, independent of any associations whatsoever. I must observe, that the ideas of darkness and blackness are much the same, and that they differ only in this, that blackness is a more confined idea. Mr. Cheselden has given us a very curious story of a boy, who had been born blind, and continued so until he was thirteen or fourteen years old; he was then couched for a cataract, by which operation he received his sight. Among many remarkable particulars that attended his first perceptions, and judgments on visual objects, Cheselden tells us, that the first time the boy saw a black object, it gave him great uneasiness; and that some time after, upon accidentally seeing a negro woman, he was struck with great horror at the sight. The horror, in this case, can scarcely be supposed to arise from any association. The boy appears by the account to be particularly observing, and sensible for one of his age: and therefore, it is probable, if the great uneasiness he felt at the first sight of black had arisen from its connexion with any other disagreeable ideas, he would have observed and mentioned it. For an idea, disagreeable only by association, has the cause of its ill effect on the passions evident enough at the first impression; in ordinary cases, it is indeed frequently lost; but this is, because the original association was made very early, and the consequent impression repeated often. In our instance, there was no time for such an habit; and there is no reason to think, that the ill effects of black on his imagination were more owing to its connexion with any disagreeable ideas, than that the good effects of more cheerful colours were derived from their connexion with pleasing ones. They had both probably their effects from their natural operation.

XVI. The cause why DARKNESS is terrible.

IT may be worth while to examine, how darkness can operate in such a manner as to cause pain; that is, to produce a tension in those nerves, which form the organs of sight. It may be observed, that still as we recede from the light, nature has so contrived it, that

the pupil is enlarged by the retiring of the iris, in proportion to our recess. Now instead of declining from it but a little, suppose that we withdraw entirely from the light; it is reasonable to think, that the expansion of the iris is proportionably greater, and that this part may be great darkness come to be so expanded, as to stretch the nerves that compose it far beyond their natural tone; and by this means to produce a painful sensation. Such a tension it seems there certainly is, whilst we are involved in darkness; for in such a state whilst the eye remains open, there is a continual nisus to receive light, as appears by the flashes, and luminous appearances which often seem in these circumstances to play before it; and which can be nothing but the effect of spasms, produced by its own efforts in pursuit of its object; for many other strong impulses will produce the idea of light in the eye, besides the substance of light itself, as we experience on many occasions. It may perhaps be objected, that the ill effects of darkness or blackness seem rather mental than corporeal; and I own it is true, that they do so; and so do all those that depend on the affections of the finer parts of our system. The ill effects of bad weather appear often no otherwise, than in a melancholy and dejection of spirits, though without doubt, in this case, the bodily organs suffer first, and the mind through these organs.

XVII. The effects of BLACKNESS.

BLackness is but a partial darkness; and therefore it derives some of its powers from being mixed and surrounded with coloured bodies. In its own nature, it cannot be considered as a colour. Black bodies, reflecting none, or but a few rays, with regard to sight, are but as so many vacant spaces dispersed among the objects we view. When the eye lights on one of these vacuities, after having been kept in some degree of tension by the play of the adjacent colours upon it, it suddenly falls into a relaxation; out of which it as suddenly recovers by a convulsive spring. To illustrate this; let us consider, that when we intend to sit on a chair, and find it much lower than was expected, the shock is very violent; much more violent than could be thought from so slight a fall as the difference between one chair and another can possibly make. Or if, after descending a flight of stairs, we attempt inadvertently to take another step in the manner of the former ones, the shock is extremely rude and disagreeable; and by no art, can we cause such a shock by the same means, when we expect and prepare for it. When I say, that this is owing to having the change made contrary to expectation; I do not mean solely, when the mind expects. I mean likewise, that when any organ of sense is for some time affected in some one manner, if it be suddenly affected otherwise there ensues a convulsive motion; such a convulsion as is caused when any thing happens against the expectance of the mind. And though it may appear strange that such a change as produces a relaxation, should immediately produce a sudden convulsion; it is yet most certainly so, and so in all the senses. Every one knows that sleep is a relaxation; and that silence, where nothing keeps the organs of hearing in action, is in general fittest to bring on this relaxation; yet when a sort of murmuring sounds dispose a man to sleep, let these sounds cease suddenly, and the person immediately awakes; that is, the parts are braced up suddenly, and he awakes. This I have often experienced myself, and I have heard the same from observing persons. In like manner, if a person in broad day light were falling asleep, to introduce a sudden darkness would prevent his sleep for that time, though silence and darkness in themselves, and not suddenly introduced, are very favourable to it. This I knew only by conjecture on the analogy of the senses when I first digested these observations; but I have since experienced it. And I have often experienced, and so have a thousand others; that on the first declining towards sleep,

we have been suddenly awaked with a most violent start; and that this start was generally preceded by a sort of dream of our falling down a precipice: whence does this strange motion arise; but from the too sudden relaxation of the body, which by some mechanism in nature restores itself by as quick and vigorous an exertion of the contracting power of the muscles? the dream itself is caused by this relaxation; and it is of too uniform nature to be attributed to any other cause. The parts relax soo suddenly, which is in the nature of falling; and this accident of the body induces this image in the mind. When we are in a confirmed state of health and vigour, as all changes are then less violent with us, we can seldom complain of this disagreeable sensation.

XVIII. The effects of BLACKNESS moderated.

THOUGH the effects of black be painful originally, we must not think they always continue so. Custom reconciles us to every thing. After we have been used to the sight of black objects, the terror abates, and the smoothness or glossiness or some agreeable accident of bodies so coloured, softens in some measure the horror and sternness of their original nature; yet the nature of the original impression still continues. Black will always have something melancholy in it, because the sensory will always find the change to it from other colours too violent; or if it occupy the whole compass of the sight, it will then be darkness; and what was said of darkness, will be applicable here. I do not purpose to go into all that might be said to illustrate this theory of the effects of light and darkness; neither will I examine all the different effects produced by the various modifications and mixtures of these two causes. If the foregoing observations have any foundation in nature, I conceive them very sufficient to account for all the phænomena that can arise from all the combinations of black with other colours. To enter into every particular, or to answer every objection, would be an endless labour. We have only followed the most leading roads and we shall observe the same conduct in our enquiry into the cause of beauty.

XIX. The physical cause of LOVE.

WHEN we have before us such objects as excite love and complacency, the body is affected, so far as I could observe, much in the following manner. The head reclines something on one side; the eyelids are more closed than usual, and the eyes roll gently with an inclination to the object, the mouth is a little opened, and the breath drawn slowly, with now and then a low sigh: the whole body is composed, and the hands fall idly to the sides. All this is accompanied with an inward sense of melting and languor. These appearances are always proportioned to the degree of beauty in the object, and of sensibility in the observer. And this gradation from the highest pitch of beauty and sensibility, even to the lowest of mediocrity and indifference, and their correspondent effects, ought to be kept in view, else this description will seem exaggerated, which it certainly is not. But from this description it is almost impossible not to conclude, that beauty acts by relaxing the solids of the whole system. There are all the appearances of such a relaxation; and a relaxation somewhat below the natural tone seems to me to be the cause of all positive pleasure. This will, I conceive, appear beyond any reasonable doubt, if we can shew that such things as we have already observed to be the genuine constituents of beauty, have each of them separately taken a natural tendency to relax the fibres. And if it be allowed us, that the appearance of the human body, when all these properties are united together before the sensory, further favours this opinion, we may venture, I believe, to conclude, that the passion called love is produced by this relaxation. By the same method

of reasoning, which we have used in the enquiry into the causes of the sublime, we may likewise conclude, that as a beautiful object presented to the sense, by causing a relaxation in the body, produces the passion of love in the mind; so if by any means the passion should first have its origin in the mind, a relaxation of the outward organs will as certainly ensue in a degree proportioned to the cause.

XX. Why SMOOTHNESS is beautiful.

IT is to explain the true cause of visual beauty, that I call in the assistance of the other senses. If it appears that smoothness is a principal cause of pleasure to the touch, taste, smell, and hearing, it will be easily admitted a constituent of visual beauty, especially as we have before shewn, that this quality is found almost without exception in all bodies that are by general consent held beautiful. Now with respect to the sense of feeling, there can be no doubt that bodies which are rough and angular, rouse and vellicate the parts, causing a sense of pain, which consists in the violent tension or contraction of the muscular fibres. On the contrary, the application of smooth bodies relax; gentle stroking with a smooth hand allays violent pains and cramps, and relaxes the suffering parts from their unnatural tension; and it has therefore very often no mean effect in removing swellings and obstructions. The sense of feeling is highly gratified with smooth bodies. A bed smoothly laid, and soft, that is, where the resistance is every way inconsiderable, is a great luxury, disposing to an universal relaxation, and inducing beyond any thing else, that species of it called sleep.

XXI. SWEETNESS, its nature.

NOR is it only in the touch, that smooth bodies cause positive pleasure by relaxation. In the smell and taste, we find all things agreeable to them, and which are commonly called sweet, to be of a smooth nature, and that they all evidently tend to relax their respective sensories. Let us first consider the taste. Since it is most easy to enquire into the property of liquids, and since all things seem to want a fluid vehicle to make them tasted at all, I intend rather to consider the liquid than the solid parts of our food. The vehicles of all tastes are water and oil. And what determines the taste is some salt, which affects variously according to its nature, or its manner of being combined with other things. Water and oil simply considered are capable of giving some pleasure to the taste. Water, when simple, is insipid, inodorous, colourless, and smooth, it is found when not cold to be a great resolver of spasms, and lubricator of the fibres; this power it probably owes to its smoothness. For as fluidity depends, according to the most general opinion, on the roundness, smoothness, and weak cohesion of the component parts of any body; and as water acts merely as a simple fluid, it follows, that the cause of its fluidity is likewise the cause of its relaxing quality; namely, the smoothness and slippery texture of its parts. The other fluid vehicle of tastes is oil. This too, when simple, is somewhat insipid, inodorous, colourless, and smooth to the touch and taste. It is smoother than water, and in many cases yet more relaxing. Oil is in some degree pleasant to the eye, the touch and the taste, insipid as it is. Water is not so grateful, which I do not know on what principle to account for, other than that that water is not so soft and smooth. Suppose that to this oil or water were added a certain quantity of a specific salt, which had a power of putting the nervous papillæ of the tongue into a gentle vibratory motion; as suppose sugar dissolved in it. The smoothness of the oil, and the vibratory power of the salt, cause the sense we call sweetness. In all sweet bodies, sugar, or a substance very little different from sugar, is constantly found; every species of salt examined by the microscope has its own distinct, regular, invariable

form. That of nitre is a pointed oblong; that of sea salt an exact cube; that of sugar a perfect globe. If you have tried how smooth globular bodies, as the marbles with which boys amuse themselves, have affected the touch when they are rolled backward and forward and over one another, you will easily conceive how sweetness, which consists in a salt of such nature, affects the taste; for a single globe, though somewhat pleasant to the feeling, by the regularity of its form, and the somewhat too sudden deviation of its parts from a right line, is nothing near so pleasant to the touch as several globes, where the hand gently rises to one and falls to another; and this pleasure is greatly increased if the globes are in motion, and sliding over one another; for this soft variety prevents that weariness, which the uniform disposition of the several globes would otherwise produce. Thus in sweet liquors, the parts of the fluid vehicle though most probably round, are yet so minute as to conceal the figure of their component parts from the nicest inquisition of the microscope; and consequently being so excessively minute, they have a sort of flat simplicity to the taste, resembling the effects of plain smooth bodies to the touch; for if a body be composed of round parts excessively small, and packed pretty closely together, the surface will be both to the sight and touch as if it were nearly plain and smooth. It is clear from their unveiling their figure to the microscope, that the particles of sugar are considerably larger than those of water or oil, and consequently that their effects from their roundness will be more distinct and palpable to the nervous papillæ of that nice organ the tongue: they will induce that sense called sweetness, which in a weak manner we discover in oil, and in a yet weaker in water; for insipid as they are, water and oil are in some degree sweet; and it may be observed, that insipid things of all kinds approach more nearly to the nature of sweetness than to that of any other taste.

XXII. SWEETNESS relaxing.

IN the other senses we have remarked, that smooth things are relaxing. Now it ought to appear that sweet things, which are the smooth of taste, are relaxing too. That sweet things are generally so is evident, because all such, especially those which are most oily, taken frequently or in a large quantity, very much enfeeble the tone of the stomach. Sweet smells, which bear a great affinity to sweet tastes, relax very remarkably. The smell of flowers disposes people to drowsiness; and this relaxing effect is further apparent from the prejudice which people of weak nerves receive from their use. It were worth while to examine, whether tastes of this kind, sweet ones, tastes that are caused by smooth oils and a relaxing salt are not the originally pleasant tastes. For many which use has rendered such, were not at all agreeable at first. The way to examine this is, to try what nature has originally provided for us, which she has undoubtedly made originally pleasant: and to analyse this provision. Milk is the first support of our childhood. The component parts of this are water, oil, and a sort of a very sweet salt called the sugar of milk. All these when blended have a great smoothness to the taste, and a relaxing quality to the skin. The next thing children covet is fruit, and of fruits, those principally which are sweet; and every one knows that the sweetness of fruit is caused by a subtle oil and such a salt as that mentioned in the last section. Afterwards, custom, habit, the desire of novelty, and a thousand other causes, so mix, adulterate, and change our palates, that we can no longer reason with any satisfaction about them. Before we quit this article we must observe; that as smooth things are, as such, agreeable to the taste, and are found of a relaxing quality; so on the other hand, things which are found by experience to be of a strengthening quality, and fit to brace the fibres, are almost universally rough and pungent to the taste, and in

many cases rough even to the touch. We often apply the quality of sweetness, metaphorically, to visual objects. For the better carrying on this remarkable analogy of the senses, we may here call sweetness the beautiful of the taste.

XXIII. VARIATION, why beautiful.

ANOTHER principal property of beautiful objects is, that the line of their parts is continually varying its direction; but it varies it by a very insensible deviation, it never varies it so quickly as to surprise, or by the sharpness of its angle to cause any twitching or convulsion of the optic nerve. Nothing long continued in the same manner, nothing very suddenly varied can be beautiful; because both are opposite to that agreeable relaxation, which is the characteristic effect of beauty. It is thus in all the senses. A motion in a right line, is that manner of moving next to a very gentle descent, in which we meet the least resistance, yet it is not that manner of moving, which next to a descent, wearies us the least. Rest certainly tends to relax; yet there is a species of motion which relaxes more than rest; a gentle oscillatory motion, a rising and falling. Rocking sets children to sleep better than absolute rest; there is indeed scarce any thing at that age, which gives more pleasure than to be gently lifted up and down; the manner of playing which their nurses use with children, and the weighing and swinging used afterwards by themselves as a favourite amusement, evince this very sufficiently. Most people must have observed the sort of sense they have had, on being swiftly drawn in an easy coach, on a smooth turf, with gradual ascents and declivities. This will give a better idea of the beautiful, and point out its probable cause better than almost any thing else. On the contrary; when one is hurried over a rough, rocky, broken road, the pain felt by these sudden inequalities shews why similar sights, feelings and sounds, are so contrary to beauty; and with regard to the feeling, it is exactly the same in its effect, or very nearly the same, whether, for instance, I move my hand along the surface of a body of a certain shape, or whether such a body is moved along my hand. But to bring this analogy of the senses home to the eye; if a body presented to that sense has such a waving surface that the rays of light reflected from it are in a continual insensible deviation from the strongest to the weakest, which is always the case in a surface gradually unequal, it must be exactly similar in its effect on the eye and touch; one of which operates on it directly, on the other indirectly. And this body will be beautiful if the lines which compose its surface are not continued, even so varied, in a manner that may weary or dissipate the attention.

XXI. Concerning SMALLNESS.

TO avoid a sameness which may arise from the too frequent repetition of the same reasonings, and of illustrations of the same nature, I will not enter very minutely into every particular that regards beauty, as it is founded on the disposition of its quantity, or its quantity itself. In speaking of the magnitude of bodies there is great uncertainty, because the ideas of great and small, are terms almost entirely relative to the species of the objects, which are infinite. It is true, that having once fixed the species of any object, and the dimensions common in the individuals of that species, we may observe some that exceed, and some that fall short of the ordinary standard: these which greatly exceed, are by that excess, provided the species itself be not very small, rather great and terrible than beautiful; but as in the animal world, and in a good measure in the vegetable world likewise, the qualities that constitute beauty may possibly be united to things of greater dimensions; when they are so united they constitute a species something different both from the sublime and beautiful, which I have before called

Fine; but this kind I imagine has not such a power on the passions, either as vast bodies have which are endued with the correspondent qualities of the sublime; or as the qualities of beauty have when united in a small object. The affection produced by large bodies adorned with the spoils of beauty, is a tension continually relieved; which approaches nearer to the nature of mediocrity. But if I were to say how I find myself affected upon such occasions, I should say, the sublime suffers less by being united to some of the qualities of beauty, than beauty does by being joined to greatness of quantity, or any other properties of the sublime.

There is something so over-ruling in whatever inspires us with awe, in all things which belong ever so remotely to terror, that nothing else can stand in their presence. There lie the qualities of beauty either dead and unoperative; or at most exerted to mollify the rigour and sternness of the terror, which is the natural concomitant of greatness. Besides the extraordinary great in every species, the opposite to this, the dwarfish and diminutive ought to be considered. Littleness, merely as such, has nothing contrary to the idea of beauty. The humming bird both in shape and colouring yields to none of the winged species, of which it is the least; and perhaps his beauty is enhanced by his smallness. But there are animals, which when they are extremely small are rarely (if ever) beautiful. There is a dwarfish size of men and women, which is almost constantly so gross and massive in comparison of their height, that they present us with a very disagreeable image. But if a man was found not above two or three feet high, supposing such a person to have all the parts of his body of a delicacy suitable to such a size, and otherwise endued with the common qualities of other beautiful bodies; I am pretty well convinced that a person of such a stature might well be considered as beautiful; might be the object of love; might give us very pleasing ideas on viewing him. The only thing which could possibly interpose to check this pleasure is, that such creatures, however formed, are unusual, and are often therefore considered as something monstrous.

The large and gigantic, though very compatible with the sublime, is contrary to the beautiful. It is impossible to suppose a giant to be the object of love. When we let our imaginations loose in romance, the ideas we naturally annex to that size are those of tyranny, cruelty, injustice, and every thing horrid and abominable. We paint the giant ravaging the country, plundering the innocent traveller, and afterwards gorging himself with his half-living flesh: such are Polyphemus, Cacus, and others, who make such a figure in romances and heroic poems. The event we attend to with the greatest satisfaction is their defeat and death. I do not remember in all that multitude of deaths with which the Iliad is filled, that the fall of any man remarkable for his great stature and strength touches us with pity; nor does it appear that the author, so well read in human nature, ever intended it should. It is Simoisius in the soft bloom of youth, torn from his parents, who tremble for a courage so ill suited to his strength; it is another hurried by war from the new embraces of his bride; young, and fair, and a novice to the field, who melts us by his untimely fate. Achilles, in spite of the many qualities of beauty which Homer has bestowed on his outward form, and the many great virtues with which he has adorned his mind, can never make us love him. It may be observed, that Homer has given the Trojans, whose fate he has designed to excite our compassion, infinitely more of the amiable social virtues than he has distributed among his Greeks. With regard to the Trojans, the passion he chuses to raise is pity; a passion founded on love; and these lesser, and if I may say, domestic virtues, are by far the most amiable. But he has made the Greeks far their superiors in the politic and military virtues. The

councils of Priam are weak; the arms of Hector comparatively feeble; his courage far below that of Achilles. Yet we love Priam more than Agamemnon, and Hector more than his conqueror Achilles. Admiration is the passion which Homer would excite in favour of the Greeks, and he has done it by bestowing on them the virtues which have but little to do with love. This short digression is perhaps not wholly beside our purpose, where our business is to shew, that objects of great dimensions are incompatible with beauty, the more incompatible as they are greater; whereas the small, if ever they fail of beauty, this failure is not to be attributed to their size.

XXVI. Of COLOUR.

WITH regard to colour, the disquisition is almost infinite; but I conceive the principles laid down in the beginning of this part are sufficient to account for the effects of them all, as well as for the agreeable effect of transparent bodies, whether fluid or solid. Suppose I look at a bottle of muddy liquor, of a blue or red colour, the blue or red rays cannot pass clearly to the eye, but are suddenly and unequally stopped by the intervention of little opaque bodies, which without preparation change the idea, and change it too into one disagreeable in its own nature, conformable to the principles laid down in sect. 24. But when the ray passes without such opposition through the glass or liquor, when the glass or liquor are quite transparent, the light is something softened in the passage, which makes it more agreeable even as light; and the liquor reflecting all the rays of its proper colour evenly, it has such an effect on the eye, as smooth opaque bodies have on the eye and touch. So that the pleasure here is compounded of the softness of the transmitted, and the evenness of the reflected light. This pleasure may be heightened by the common principles in other things, if the shape of the glass which holds the transparent liquor be so judiciously varied, as to present the colour gradually and interchangeably weakened and strengthened with all that variety which judgment in affairs of this nature shall suggest. On a review of all that has been said of the effects, as well as the causes of both; it will appear, that the sublime and beautiful are built on principles very different, and that their affections are as different: the great has terror for its basis; which, when it is modified, causes that emotion in the mind, which I have called astonishment; the beautiful is founded on mere positive pleasure, and excites in the soul that feeling, which is called love. Their causes have made the subject of this fourth part.

The end of the Fourth Part.