The origin of our ideas of beauty, order, harmony, design

Francis Hutcheson

[Brackets] enclose editorial explanations. small ·dots· enclose material that has been added, but can be read as though it were part of the original text. occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. every four-point ellipsis . . . . indicates the omission of a brief passage that seems to present more difficulty than it is worth. longer omissions are reported between brackets in normal-sized type.—The division into eight sections is Hutcheson's; so are the sixty-eight headings within sections, except that in the original they are in the margins rather than across the text.

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Glossary

affection: In the early modern period, 'affection' could mean 'fondness', as it does today; but it was also often used, as in this work, to cover every sort of pro or con attitude—desire, approval, liking, disapproval, disliking, etc.

agent: In this work, as in early modern writings generally, an agent is simply someone who acts. There's no suggestion of our present sense of 'someone who acts *for* someone else'. Some occurrences of the word in this version replace Hutcheson's 'actor'.

amiable: This meant 'likable', 'lovable', 'very attractive'. A good deal stronger than the word's normal meaning today.

a priori, ***a posteriori***: Before Kant, these phrases were seldom used to mark the difference between •'independently of experience' and •'on the basis of experience'. Their usual meaning (as on page 25) was to mark the difference between •seeing something happen and working out what will follow from it and •seeing something happen and working out what must have caused it, i.e. •causally arguing forward and •causally arguing backwards.

compare: Hutcheson several times uses 'compare' and 'comparison' in a now-obsolete sense in which to 'compare' two items is just to put them side by side in your thought to see how they are related; there needn't be any question of their being *alike*. Most of his uses of these words mean by them what we do.

determine, **determination:** These are used an enormous amount in early modern philosophy. The absolutely basic meaning of 'determine' is *settle*, *fix*, *pin down*; thus, to determine what to do next is to decide what to do next, to settle the question. In our day 'He is determined to do x' means that he resolutely intends to do x; but in early modern times 'He is determined to do x' would be more likely to mean 'Something about how he is constituted settles it that he will do x'; it could be that he is made to do x, or caused to do x. But 'determine' can't simply be replaced by 'cause' throughout; when on page 38 Hutcheson says that God's goodness 'determines' him to act in a certain way, he would certainly have rejected 'cause'.

disinterested: What this meant in early modern times is what it still means when used by literate people, namely 'not *self*-interested'. I have 'disinterested malice' towards someone if I want him to suffer although there is no gain for me in this (apart, presumably, from the satisfaction of knowing that he is suffering).

education: In early modern times this word had a somewhat broader meaning than it does today. It wouldn't have been misleading to replace it by 'upbringing' throughout.

equipage: This imprecise term covers: coach and horses, servants' uniform, elegant cutlery and dishes, and so on. In some but not all uses it also covers furniture.

evil: Used by philosophers as a noun, this means merely 'something bad'. We can use 'good' as a noun ('friendship is a good'), but the adjective 'bad' doesn't work well for us as a noun ('pain is a bad'); and it has been customary to use 'evil' for this purpose (e.g. 'pain is an evil', and 'the problem of evil' meaning 'the problem posed by the existence of bad states of affairs'). Don't load the noun with all the force it has as an adjective.

indifferent: To say that some kind of conduct is 'indifferent' is to say that it is neither praiseworthy nor wrong.

liking: Today's meaning for Hutcheson's word 'relish' makes his use of it distracting, so it and its cognates have been replaced by 'liking' throughout. Remember, though, that these 'likings' are being thought of as something like *tastes*. In **(8)** on page 31 'liking' and '(dis)liking' replace 'fancy'.

luxury: This meant something like: *extreme* or *inordinate* indulgence in sensual pleasures. A 'luxurious' person was someone wholly given to the pleasures of the senses—mostly but not exclusively the pleasures of eating and drinking. In Hutcheson's use of the word on page 36 it seems to be confined to the sense of taste or the pleasures of eating and drinking.

mischief: This meant 'harm, injury'—much stronger and darker than the word's meaning today.

object: In early modern usage, anything that is aimed at, wanted, loved, hated, thought about, feared, etc. is an *object* of that aim, desire, love, etc. *Anything*: it could be a physical object, but is more likely to be a state of affairs, a state of mind, an experience, etc.

occasion: It is often used to mean the same as 'cause' (noun or verb), but it began its philosophical career in opposition to 'cause'. According to the 'occasionalist' theory about body-mind relations: when you are kicked, you feel pain; what causes the pain is not the kick but God, and the kick comes into it not as *causing* God to give you pain (because nothing causes God to do anything) but as the 'occasion' for his doing so. Perhaps something like a signal or a trigger. Writers who weren't obviously pushing the occasionalist line still used 'occasion' sometimes without *clearly* meaning anything but 'cause'.

performance: In 18th century Britain a published work was often referred to as a 'performance' by its author, especially when it was being praised. Hutcheson's use of the word on page 34 seems not have that meaning or the other meaning (the one that is now current).

primary qualities: These are shape, size, texture, and perhaps a few others. They were thought by some early modern philosophers to be 'really in' the objects, in contrast with 'secondary qualities'—colour, taste, warmth, and some others—that were thought to be in the perceiver's mind, and perhaps not to resemble *anything* in the object. This nonsense arose from a misunderstanding of a truth that Descartes and Locke saw but sometimes fumbled: that

> 'All there is to a thing's being red (say) is its having a power to affect observers' perceptions in a certain way'

is plausible in a way in which

> 'All there is to a thing's being spherical (say) is its having a power to affect observers' perceptions in a certain way'

is not in the least plausible. This contrast does *not* imply that redness is in the mind!

principle: Hutcheson often uses this word in a sense, once common but now obsolete, in which 'principle' means 'source', 'cause', 'driver', 'energizer', or the like. (Hume's *Enquiry Concerning the Principles of Morals* is, as he explicitly tells us, an enquiry into the *sources in human nature* of our moral thinking and feeling.)

science: In early modern times this word applied to any body of knowledge or theory that is (perhaps) axiomatised and (certainly) conceptually highly organised. That is why on page 15 Hutcheson counts Pufendorf's theory of duty among the 'sciences'.

selfish: This is not a term of criticism. Think of it as 'self-ish', i.e. 'self-related' or 'concerned with one's own interests',

but *not* necessarily to the exclusion of proper care for the interests of others.

sensible: This means 'relating to the senses', and has nothing to do with being level-headed, prudent, or the like.

sentiment: This can mean 'feeling' or 'belief', and when certain early modern writers speak of 'moral sentiments' they may mean both at once, or be exploiting the word's ambiguity.

speculative: This means 'having to do with non-moral propositions'. Ethics is a 'practical' discipline, chemistry is a 'speculative' one.

ugly: This word occurs only once in the original of this work, and 'ugliness' never. In the present version they replace 'deformed' and 'deformity', which mean something stronger and nastier to us but didn't do so in Hutcheson's day. The occurrence on page 28 of 'ugly or deformed' is puzzling.

vice: In this work, 'vice' simply means 'bad behaviour (of whatever kind)', and 'vicious' is the cognate adjective. Don't load either of these with the (different sorts of) extra meaning that they tend to carry today.

5: Our reasoning from the beauty or regularity of effects to design and wisdom in the cause

God gave us our sense of beauty arbitrarily

(1) The fact that uniformity or regularity in objects impresses us as beautiful seems to be purely contingent; it's not necessary in the nature of things, and comes about as a result of our constitution through which the Author of our nature has made such forms pleasant to us. Other minds may be constructed in such a way that they get no pleasure from uniformity; and we actually find that the animals known to us aren't all equally pleased by the same regular forms. (I'll probably return to this.) Let us then start with the supposition about this that is least favourable to the argument I am examining, namely:

> It was arbitrary on God's part to give us a constitution that makes us like uniformity. There are countless possible tastes, or likings of beauty, so that you couldn't possibly throw together fifty or a hundred pebbles without thereby making an agreeable habitation for some animal or other that would find it beautiful.

It's clear from this that we have no reason to infer from the perception of beauty in any one effect that there was design in the cause; because a mind might be constituted in such a way as to be pleased with the kinds of irregularity that could be caused by an undirected force.[2] But then consider: there's an infinity of

- possible forms that any system may have,
- places in which animals may be situated, and
- likings or senses-of-beauty that these animals might have.

Given all that, how probable is it that even **one** animal should *by chance* be placed in a system agreeable to its taste? The odds against it must be *infinity to one* or worse! And the odds against **a multitude** of animals with the same sense of beauty coming *by chance* to be in places they find agreeable? Longer odds still!

Undirected force

(2 Let F_R be some regular form, and let F_I be an irregular form with the same degree of complexity. Now, the probability that in any one system of matter an undirected force will produce F_R is exactly the same as the probability of its producing F_I. ·But that concerns *one* regular form and *one* irregular one. Now consider·: the irregular forms that any system may take outnumber the regular forms it could take in the way that *infinity* outnumbers *one*. . . . The area of one square inch can have an infinity of regular forms:

[2] By 'undirected force' or 'undesigning force' I mean the force with which an agent may put matter into motion without having any design or intention to produce any particular kind of result. This *conatus ad motum* [Latin, meaning 'urge to move'] without any direction seems such a gross absurdity in the Cartesian metaphysic that it's beneath the dignity of common sense to condescend to atttack it. But men have so many confused notions that are versions of it that it may be useful to show that even if we allow people to accept this very absurd postulate it still won't let them explain away the appearances of regularity in the world; and that's what the first fourteen articles in this section will try to show. There would be no work for these arguments to do if •all men were convinced of something that seems pretty obvious to •anyone who is thinking straight, namely that there can't be any unthinking agent, and that 'chance' and 'nature'—as they are used in this context—are mere empty names that are relative only to our Ignorance.

the equilateral triangle,
the square,
the pentagon,
the hexagon,
the heptagon,

and so on. But for each one regular form there are infinitely many irregular ones, such as

an infinity of scalene triangles for one equilateral one,
an infinity of trapezia for the one square,
an infinity of irregular pentagons for one regular one

and so on. Therefore, given some one system agitated by undesigning force, it is infinitely more probable that it will turn itself into an irregular form than a regular one. Shake up a system of six parts—what is the chance that they will fall into the form of a regular hexagon? Not better than one out of infinity; and the more complex we make the system, the greater are the odds.

This is confirmed by our constant experience that regularity never arises from any undesigned force of ours; and from this—·not just our experience, but my whole argument up to here·—I conclude that wherever there is any regularity in the disposition of a system that is capable of many other dispositions, there must have been design in the cause; and the more parts the system has the more obvious it is that this inference is justified.

But this conclusion is too rash, unless some further support is found for it. Here is why. Men who have a sense of beauty in regularity are generally led in all their arrangements of bodies to be careful to achieve some kind of regularity, and hardly ever design irregularity; so we assume that other beings are like us in this respect, i.e. that they too are careful to achieve regularity; so that whenever we see regularity in an effect we infer intention in the cause, regarding irregularity always as evidence of lack of design. But if other agents have different senses of beauty, or if they have no sense of it at all, irregularity may as well be designed as regularity. And if that's how things stand, there's the same reason to infer •design in the cause from any one •irregular effect as from a •regular one: there are infinitely many other forms possible as well as this irregular one that was actually produced, and to such a being with no sense of beauty every form is as much to its taste as any other[3]. . . . Thus, on the supposition that we are dealing with an agent with no sense of beauty, no form in the effect is better evidence of design in the cause than any other; unless we bring in a general metaphysical consideration (too subtle to be certain) that there is no proper agent—·nothing that strictly acts, causes, *does* anything·—without design and intention, and that every effect flows from the intention of some cause. [Accordingly, between here and **(18)** on page 26 Hutcheson mentions beauty only when calling it irrelevant to the argument he is conducting.]

Similar forms by chance are impossible

(3) However, from the points I have made, this follows [to the end of this paragraph]: Suppose a mass of matter of infinite bulk that is somehow determined [see Glossary] from its own nature to produce out of itself **a prism with volume = 1 in^3 and a base of area = .5 in^2**. (I am supposing this to be determined

[3] There's a big difference between the kind of being I am talking about here and a being that has no intention for any reason whatsoever to produce one kind of result rather than another. In the present context the latter sort of being would be the same as *chance*, but the former wouldn't. A being with no sense of beauty may still be capable of design, and of intention to produce regular forms; and the observation in any number of effects of greater regularity than could be expected from undirected force—·i.e. from chance·—is evidence of design and intention in the cause. And this holds even if the cause is supposd to have no sense of beauty in such forms, because he may have chosen them for other reasons. . . .

by causal factors that don't involve design, which may be almost impossible.) Suppose that these conditions—·the ones in bold type·—are determined while everything else is left to undirected force; all we could expect from undirected force in this case would be •one equilateral prism, or •two perhaps; because infinitely many irregular prisms are possible with that base and volume; and when we met with many such prisms, we should conclude that they were probably produced by design, since they are more than could have been expected by the laws of chance.

(4) If nothing in this infinite mass determined it to produce a prism, the most we could expect from its random jumbling of bits of matter would be one prism of any kind, since there is an infinity of other solids into which the mass might be resolved; and if we found a great many prisms we would have reason to presume design. In an infinite mass of matter of this kind, therefore, we would have no reason to expect it to come up with a body of any given size and form: of any given size there are infinitely many possible forms, and of any form there are infinitely many possible sizes; and if we found a number of bodies of the same size and form, we would have that much evidence of design.

(5 There's a trivial objection that might be raised on the basis of the fact that certain bodies form crystals when the fluid they were swimming in is evaporated. When this happens we often see regular forms arising, though no-one thinks there is anything involved but an undirected force of attraction. But this objection is removed by something that we have good reason to believe, namely that the smallest particles of crystallized bodies have fixed regular forms given to them in the constitution of nature. If they do, then it's easy to conceive how their attractions might produce regular forms: but unless we suppose some preceding regularity in the figures of attracting bodies, they can never form any regular body at all. and hence we see how improbable it is that the whole mass of matter, not only in this globe but in all the fixed stars known to us. . . .could have come together in such a way as to produce any number of similar bodies, regular or irregular.

Combinations by chance are impossible

(6) There are many bodily configurations that the smallest degree of design could easily create but which we couldn't expect from all the powers of chance—or force without design—after an infinity of interactions. . . . Thus, suppose we start with an infinite quantity of matter that is determined to shake out into definite solid bodies, but is otherwise governed by forces that no-one is directing. Given a body produced by this mass, the odds against its being a prism are infinity to one; and given that it is a prism the odds against its being regular are infinity to one. [The 'infinity' that Hutcheson is referring to can be named by a numeral $\aleph_0$ pronounced 'aleph-null', providing for higher infinities $\aleph_1$ and so on. These higher infinities are not reached in the way Hutcheson envisages here, but in his day nobody knew that.] Now suppose another infinity of matter that is determined to shake itself out into tubes whose openings are exactly equal to the bases of the prisms we have been talking about; the odds against one of these tubes having an opening that is both prismatic and equiangular are the second power of infinity to one [= $\aleph_0{}^2$ to 1]; then given that there is a tube with that shape, formed so that one (just one) of the prisms could fit snugly into it, the odds against its meeting up with that prism in infinite space are infinity to one [$\aleph_0$ to 1]; and if they do meet, the odds against their respective axes being in the same straight line are infinity to one [$\aleph_0$ to 1]; and if they do meet and line up in that way, the odds against their doing so in such a way that the prism can enter the tube, with angle meeting angle, are infinity

to three [$\aleph_0$ to 3]. So we see infinitely improbable it is that all the powers of chance in infinite matter, agitated through infinite ages, could ever bring about this small composition of a prism entering a prismatic hole; the odds against it are at least the third power of infinity to three [$\aleph_0{}^3$ to 3], and yet the smallest design could easily make it happen.

(7) So isn't it fair for us to regard it as altogether absurd—as next-door to an absolutely strict impossibility—that all the powers of undirected force should ever make even *one* machine as complex as the most imperfect plant or the lowest animal? The level of mechanical complication in these natural bodies is vastly greater than the simple combination of one prism slotted into one tube, and the improbability increases with it.

(8) That line of argument from the frequency of regular bodies of one form in the universe, and from the combinations of various bodies, is entirely independent of any perception of beauty. It would prove design in the cause just as well if no-one found anything to be beautiful, because it comes down to this:

- If any effect recurs more often than the laws of chance determine, that is some reason to presume that design has been at work;
- Combinations that no undesigned force could give us reason to expect necessarily lead to the same presumption;

[and so on, with a rapid repeat of the argument just to show that the concept of *beauty* has no role in it.]

(9) The idea of infinity is difficult to manage in reasoning, but I do want to bring my argument nearer to being something like a theorem.

·HUTCHESON'S NEXT TWO SENTENCES, VERBATIM·
The powers of chance, with infinite matter in infinite ages, may answer hazards as the fifth power of infinite and no more: thus the quantity of matter may be conceived as the third power of infinite and no more, the various degrees of force may make another power of infinite, and the number of rencounters may make the fifth. But this last only holds on supposition, that after every rencounter there is no cohesion, but all is dissolved again for a new concourse, except in similar forms or exact combinations; which supposition is entirely groundless, since we see dissimilar bodies cohering as strongly as any, and rude masses more than any combinations.

·THE MODIFIED VERSION NOW RESUMES·
Now, to produce any given body •in a given place, •of a given size and •a given shape, the chances of failure are

- at least one power of infinity against getting the place,
- a power of infinity against getting the size, and
- at least three powers of infinity against getting even the simplest given shape.

Regarding that last point: let the shape be a four-sided prism; that the surfaces should be planes requires one power of infinity; that they should be parallel (in this case, or at any given angle for other shapes) requires another power of infinity; and that they should be in any given ratio to each other requires at least the third power—because for each of these three there's at least an infinity of other cases possible beside the given one. So that all the powers of chance couldn't produce more than one body of each simpler shape or size; we might expect one pyramid, or cube, or prism perhaps, but when we strengthen the required conditions, the prospect ·of success· must grow more improbable, so that when we actually find the complex figures, and combinations of bodies, and similarity in species—which we never could

reasonably hope from chance—we must certainly conclude that they were produced by design.

Combinations of irregular forms are equally impossible

(10) Combinations of regular forms, or of irregular ones exactly fitting into each other, require such vast powers of infinity [i.e. require $\aleph_0{}^n$ for such high values of n] to bring them about. . . .that all probability or possibility of their being accomplished by chance seems quite to vanish. Apply the argument in **(6)** above—·the one about the prism and the tube·—to our simplest machines, for example a pair of wheels of an ordinary carriage:

- •each wheel circular,
- •spokes equal in length, thickness, shape,
- •the wheels set parallel,
- •the axle fixed in both hubs, and secured from coming out at either end.

Even if that were a complete list of the requirements for a functioning pair of wheels, the odds against any one of them coming about through an undirected shuffling of matter is infinity to one; so the odds against all of them being satisfied by a single pair of wheels would be the nth power of infinity to one, where n is the number of requirements. Then what are we to say about the chances of an undirected mass of matter forming a plant, a tree, an animal, a man, with such multitudes of inter-related cavities, working joints, properly attached muscles, patterns of veins, arteries, nerves? The odds against such machines coming about by chance must be near to the infinitieth power of infinite to unity [i.e. near to $\aleph_0{}^{\aleph_0}$ to 1].

(11) Furthermore, even if all my argument up to here were wrong, and we *could* have reason to expect undirected matter to produce such forms. . . ., the most we could hope for would be *one* of these forms among an infinity of others. So when we see such a multitude of individuals of one species, similar to each other in a vast number of parts. . . ., what possible room is there left for doubting that there is design in the universe? None but •the barest possibility against •an inconceivably great probability, surpassing everything short of strict demonstration.

(12) This argument, as I remarked in **(8)**, is free of any reliance on any form's being experienced as beautiful; because although squares are more beautiful than trapezia, the exact similarity of a hundred or a thousand trapezia proves design as well as the similarity of that many squares, since both are equally far above all the powers of undirected force or chance. . . , and what is above the powers of chance must give us a presumption for design.

Allowing that a leg, or arm, or eye might have been the effect of chance (which I have shown to be most absurd, and next to absolutely impossible), the odds against its having a corresponding leg, arm, eye exactly like it must be a power of infinity proportioned to the complication of parts [i.e. $\aleph_0{}^n$ where n is the number of parts]; so that allowing twenty or thirty parts in such a structure, it would be as the twentieth or thirtieth power of infinity to one that the corresponding part would not be similar. What are we to say then regarding the similar forms of a whole species?

Gross similarity by chance is impossible

(13) Here is an objection that might be brought against my argument:

> Natural bodies are not •exactly similar but only •grossly so—·roughly and approximately similar, seemingly alike· to our senses. A vein, an artery, a bone may not be exactly similar to the corresponding vein etc. in the same animal, though it appears so to our senses, which judge things only on the large scale

> and don't pick out the small constituent parts. In the various individuals of a species the dissimilarity is always one our senses can detect, often in the internal structure and often—indeed *always*—in the external appearance.

To remove this objection all I need to show is that the multitude of cases in which sensible [see Glossary] dissimilarity could have happened are still infinitely more than all the cases in which sensible similarity might; so that the same reasoning holds from sensible similarity as from mathematically exact similarity; and again that the cases of gross dissimilarity outnumber the cases of gross similarity as infinity outnumbers one.

(14) To prove both these assertions, let us consider a simple example. Suppose two trapezia of a square foot in area, appearing grossly similar to one another because no side of one differs by more than a tenth of an inch from the corresponding side of the other, and no angle in one is more than ten minutes [i.e. a sixth of a degree] greater than the corresponding angle of the other. Now, this tenth of an inch is infinitely divisible, as are also the ten minutes, so that within the limits set by the apparent similarity there's an infinity of possible insensible dissimilarities. [Hutcheson continues with a highly suspect argument purporting to show that sensible dissimilarities outnumber insensible ones by the ratio of infinity to 1 [see page 39], and then continues:] So how vastly greater must the multitude be of all possible sensible dissimilarities in such complex bodies as legs, arms, eyes, arteries, veins, skeletons?

(15) As for the dissimilarities of animals of the same species, the same reasoning makes it clear that •the possible cases of gross dissimilarity are infinite, and then that •every case of gross dissimilarity contains also all the cases of insensible dissimilarity. Thus, if we adopt this standard for some species S:

> Two members of S count as grossly similar if no limb in either is longer or thicker than the corresponding limb in the other by more than one third of ·the width of· the head,

it's clear that there's an infinity of possible gross dissimilarities, and then *each* these has nested within it an infinity of cases of finer-grained dissimilarity. . . .

zxThis may sufficiently show us the absurdity of the Cartesian or Epicurean hypothesis, even granting their postulate of undirected force acting on infinite matter; and it seems to be almost a demonstration that there is design in the universe.

(16) There's one last objection to be met, namely this point of view that some people have:

> This argument holds better *a priori* than *a posteriori* [see Glossary]. That is, we have better reason to believe
>
> > when we see a cause about to act without knowledge, that it won't achieve any given or desired end
>
> than to believe
>
> > when we see the end actually attained, that the cause acted with knowledge.
>
> Thus, when someone is about to draw a ticket in a lottery where there is only one prize to a thousand blanks, it is highly probable that he'll draw a blank; but if we see him actually draw the prize, we have no ground to conclude that he had knowledge or skill to bring this about.

But the answer to this is obvious. In such contrivances ·as lotteries· there are rules in play that pretty well guarantee that skill can have no place, and a probability of a thousand to one doesn't outweigh that consideration. But make the

probability high enough and it will soon overpower any arguments based on the rules. If we see a man draw prizes ten times in a row, in a lottery where there were only ten prizes to ten thousand blanks, I don't think many people would doubt that skill or trickery had been at work; much less would we think it was mere luck if we saw a man draw a hundred prizes (out of a hundred thousand) or a thousand prizes (out of a million). In the works of nature the situation is entirely different: we don't have the least evidence against art or design ·as we do in the case of the lottery·. A thinking cause is surely at least as probable a notion as •chance, •general force, •urge to move, or the •swerve of atoms—·these are technical terms from various philosophies·—to account for any effect whatsoever; and then all the regularity, combinations, similarities of species, are so many demonstrations that there was design and intelligence in the cause of this universe; whereas in fair lotteries all skill in drawing is made nearly impossible.

Irregularity doesn't prove lack of design

(17) Note that a rational agent may be capable of •applying force without intending to produce any particular form, and of •designedly producing irregular or dissimilar forms as well as regular and similar ones. And so although all the regularity, combination and similarity in the universe are evidence of design, irregularity is not evidence of the contrary. For it to be evidence that design is not at work in the universe we would have to suppose that •the Agent has a sense of beauty that determines him always to act regularly and to delight in similarity, and also (though this is *obviously* absurd) •that he can't have any motive of action conflicting with that. The universe contains •plenty of effects that seem to have been left to the general laws of motion. . . , and •many cases where similarity has obviously been designed in some respects and probably neglected in others—or even dissimilarity designed. Thus we see the general exact resemblance between the two eyes of most persons; and yet perhaps no other third eye in the world is exactly like them. We see a gross conformity of shape in all persons in innumerable parts, and yet no two individuals of any species are indistinguishable; and that may have been intended for the good of the whole species.

Wisdom, prudence

(18) Up to here I have argued only for •design or •intention, in opposition to blind force or chance; and the argument has owed nothing to the arbitrary constitution of our internal sense of beauty. Beauty is often supposed to be evidence for more than design—specifically for intelligence, wisdom and prudence in the Cause. Let us look into this.

Wisdom involves the pursuit of the best ends by the best means; so we can't infer from any effect that the cause is wise unless we know what is best from the point of view of the cause or agent. Among men who have pleasure in contemplating uniformity, the beauty of effects is evidence for wisdom, because this is good from their point of view; but this evidence wouldn't exist if we were devoid of this sense of beauty. So the beauty apparent to us in nature doesn't in itself show wisdom in the cause unless this cause—this Author of nature—is supposed to be benevolent; and then indeed mankind's happiness is desirable or good from the point of view of the supreme Cause; and any form that pleases us is evidence of His wisdom. . . .

But what more immediately proves wisdom ·in the Cause of the universe· is the following. When we see a vastly complicated machine that actually achieves some end, we reasonably conclude that the machine—since it couldn't have been an effect of chance—must have been intended for the end that it does in fact arrive at; and then this *partial* knowledge of the intention entitles us to regard the complication of organs, and their delicate adjustment so as

to produce this end, as evidence of a comprehensive broad understanding in the Cause, according to the multiplicity of parts and the appropriateness of their structure.

General causes

(19) Another kind of beauty •is also pleasing to our sense, and •provides evidence for wisdom as well as design in the Cause. We encounter it when we see *many useful or beautiful effects flowing from one general cause*. There is a very good reason for men to argue from this to wisdom in the Cause. Beings like us whose powers are limited and who are incapable of a great diversity of operations. . . .are forced to choose this frugal economy of their forces, and to regard such management as evidence of wisdom in other beings like themselves. This is a bit of theoretical reasoning that involves consideration of *our* welfare; but we are also swayed in that direction by our sense of beauty in cases where our advantage is irrelevant. . . . Think of the workings of a clock: there could be a very complex machine in which the motions of the hour, minute, and second hands are caused by **three** springs or weights; but when a clock tells the time just as well while getting all three hands driven by **one** spring or weight, we all think of this as an improvement, and admire in it a beauty based on its displaying •uniformity or unity of cause amidst •diversity of effects.

General laws

(20) Later on I shall offer some reasons why the Author of nature might choose to operate in this manner by general laws and universal extensive causes, although *our* reason for this choice doesn't hold for an almighty Being. This much is certain: we do have some delightful examples of universal causes in the works of nature, and •the most studious men in these subjects like them so much that •their sense of beauty leads •them always to regard them as evidence of wisdom in the administration of nature.

(21) I have already mentioned the wonderfully simple mechanism that performs all animal motions; and the mechanism of the inanimate parts of nature is equally admirable. Think of the countless effects of that one principle [see Glossary] of **heat** that comes to us from the sun. It is

- •delightful to our sight and feeling,
- •our means of discerning objects,
- •the cause of rains, springs, rivers, winds, and
- •the universal cause of vegetation!

The uniform principle of **gravity**

- •preserves the planets in their orbits,
- •gives cohesion to the parts of each globe,
- •gives stability to mountains, hills, and artificial structures;
- •raises the sea in tides, and sinks them again, and restrains them in their channels;
- •drains the earth of its superfluous moisture by rivers;
- •raises the vapours by its influence on the air, and brings them down again in rains;
- •gives our atmosphere a uniform pressure, which our bodies need in general and especially for breathing; and
- •provides us with a universal movement that can be applied in countless engines.

How incomparably more *beautiful* this structure is than what we would have if the Deity had performed many distinct volitions •producing each particular effect separately and •preventing some of the accidental evils that incidentally flow from the general law! We may rashly imagine that this latter way of doing things might have been more useful to us, and wouldn't have been any more trouble for an omnipotent Being; but the great beauty would have been lost, and we wouldn't have had the pleasure that we do

have in contemplating this delightful scene. One would rather run the risk of its incidental evils than part with the harmonious·ly unified· form that has been a bottomless well of delight to spectators in all ages.

Miracles

(22) Now, miracles may prove that •the universe is governed by a voluntary agent, and that •it isn't guided by necessity or fate. But only a weak and undisciplined mind needs miracles to confirm the belief in a wise and good Deity; because deviation from general laws—except in very extraordinary circumstances—must be seen as evidence of inconstancy and weakness rather than of steady wisdom and power; so that miracles must *weaken* the best arguments we can have for the wisdom and power of the universal Mind.

6: The universality among men of the sense of beauty

The internal sense is not an immediate source of pain

(1) I have indicated already that all beauty is relative to some perceiving power; and consequently since we don't know how great a variety of senses there may be among animals, we can't say absolutely that any natural object is 'not beautiful'—·however it strikes us·, it may please *some* percipient. But my inquiry is confined to men; and I shall soon be looking into whether the human sense of beauty is universal, i.e. whether all men are alike in approving uniformity. Before coming to that, however, I should perhaps raise another question: Does this ·internal· sense of beauty make some objects *dis*agreeable to us, causing us pain, in the way all the other senses sometimes do?

That many objects give us no pleasure is obvious; many are certainly lacking in beauty; but there's no form that seems necessarily disagreeable in itself when we •have no fear of harm from it and •don't compare it with better things of the same kind. Many objects are naturally displeasing and distasteful to our external senses, while are others pleasing and agreeable—think of nasty and nice smells, tastes, and separate sounds. But no composition of objects strikes our sense of beauty as positively unpleasant or painful in itself, unless it gives us unpleasant simple ideas or else ·we dislike it by comparison with· something better of the kind that we have seen. [Hutcheson means 'unless it gives us simple ideas that are offensive to our *external* senses. He'll have thought that the mere word •'simple' did the job because he ties our internal sense of beauty to •complexes, •'compositions of objects'.] Ugliness is only the absence of beauty, or lack of as much beauty as is expected in the relevant species: thus bad music pleases rustics who never heard any better; and the finest ear is not offended by the sound of the orchestra tuning up if it doesn't go on for too long, but a much smaller dissonance gives offence when it occurs in the performance, where harmony is expected. A rough heap of stones is in no way offensive to someone who will be displeased with irregularity in architecture, where beauty is expected. And if there had been a species of a form that we call now ugly or deformed [see Glossary], and if

we had never seen or expected greater beauty, we wouldn't have been disgusted by it, though we wouldn't have had as much pleasure from this form as we get from those we now admire. Our sense of beauty seems designed to give us positive pleasure, but not positive pain or disgust apart from what arises from disappointment.

Approval and dislike from association of ideas

(2) There are indeed many faces that at first view are apt to raise dislike; but this is generally not from any positive ugliness that is of itself positively displeasing, but rather from •lack of expected beauty or (more often) from •their carrying some natural indications of morally bad dispositions—indications that we all learn to read in faces, airs, and gestures. This isn't caused by any form's being positively disgusting, as you can see from this:

> If after long acquaintance ·with a person whose face we at first dislike· we are sure of finding sweetness of temper, humanity and cheerfulness, although the face hasn't altered it won't disgust or displease us; whereas if anything was naturally disagreeable or painful or positively distasteful it would always continue to be so, even if our aversion to it were counterbalanced by other considerations.

Sometimes an object creates horror that isn't an effect of anything in the object itself but only an effect of fear for ourselves or compassion toward others; this happens when we have a sense of the object as dangerous, perhaps reasonably but perhaps from some foolish association of ideas. Most of the objects that arouse horror at first turn out, when experience or reason has removed the fear, to be occasions of pleasure—for example, ravenous beasts, a tempestuous sea, a craggy precipice, a dark shady valley.

Associations

(3) We'll see later that associations of ideas make objects pleasant and delightful that aren't naturally apt to give any such pleasures; and similarly an accidental conjunction of ideas may create disgust when there's nothing disagreeable in the form itself. This is the source of many fantastic aversions to the shapes of some animals and to some other forms: pigs, snakes, and some insects that are really beautiful enough are viewed with aversion by many people who have accidentally come to associate some ideas with them. There's no other way to explain distastes of this kind.

The universality of this sense

(4) For support for the thesis that all mankind agree in having their sense of beauty triggered by uniformity amidst variety, we must consult experience. ·Compare the human range of the sense of beauty with the human range of reason·. We hold that all men have reason, because they are all able to understand simple arguments, though few can manage complex demonstrations. Similarly with the sense of beauty: to show that all mankind have it, all we need is to show that

- •All men prefer uniformity to its contrary in simpler cases, even when there is no advantage for them in it; and that
- •All men, as they become able to receive and compare [see Glossary] more complex ideas, have a greater delight in uniformity and are pleased with its more complex kinds, both original and relative.

[For a reminder of that last distinction see **(17)** on page 8]. ·That's what we *need*; now let us see what we *have*.·

Was anyone ever devoid of this sense ·of beauty· in the simpler instances? **Sounds**: Few trials have been made in the simplest instances of harmony, because as soon as we find that someone can't enjoy complex compositions such as our tunes are, we don't bother with him any more. **Shapes**:

Did anyone ever—when not pushed by necessity or pulled by some great motive of convenience—choose a trapezium or any irregular curve for the ground-plan of his house? or make the opposite walls not parallel, or unequal in height? Were ever trapeziums, irregular polygons or curves chosen for the shapes of doors or windows? (These shapes might have been as useful as the regular ones, and would often have saved much of the time, labour and expense that goes into getting stones and timber into the regular shapes.). . . .

No-one was ever so extravagant [here = 'wild', 'undisciplined in thought and feeling'] as to like the kinds of shapes that you get by casually spilling coloured liquids. Who was ever pleased with different heights or dissimilar shapes in neighbouring windows? with unequal legs or arms, eyes or cheeks in a woman? I must admit, though, that •love may often counterbalance our •sense of beauty in this affair as well as in others, and superior good qualities may make us overlook such imperfections.

Real beauty alone pleases

(5) It looks as though this is right: Regularity and uniformity are so lavishly spread through the universe, and we are so thoroughly determined [see Glossary] to pursue this as the basis for beauty in works of art, that almost everything that was ever taken to be beautiful has had something of this uniformity and regularity. We are indeed often mistaken in thinking that something that is very imperfect has the greatest possible beauty; but in those cases too what is pleasing us is some degree of beauty, though there may be higher degrees of beauty that we overlook. Whenever something pleases us, our sense ·of beauty· is acting with full regularity [Hutcheson's phrase], even if it's one of the cases where a false prejudice is keeping us from pursuing objects that would please us more.

The education [see Glossary] of a Goth, for instance, makes him think that the architecture of his country is the most perfect; and he is mistaken. He may have in his mind a conjunction of some hostile ideas that make him •dislike Roman buildings and •look for ways to demolish them. (As some of our reformers destroyed the Roman Catholic buildings, not being able to separate •the ideas of the superstitious worship from •the forms of the buildings where it was practised.) Yet it is still real beauty that pleases the Goth, based on uniformity amidst variety. For the gothic pillars are uniform with each other, not only in their lozenge-shaped cross-sections but also in their heights and ornaments; their arches are not one uniform curve, but they are segments of similar curves, and are generally equal in the same ranges. Even *Indian* buildings have some kind of uniformity; and many of the ·buildings of· eastern nations, though they differ greatly from ours, have great regularity in their manner, just as Roman buildings do in theirs. . . .

History pleases in the same way

(6) There's one sort of beauty that might have been better mentioned earlier, but is also relevant here because the taste or liking [see Glossary] for it is universal in all nations, and with the young as well as the old. I am talking about the beauty of history. Everyone knows how boring it is to read a collection of newspaper stories which may be reporting the same events as an historian does; so the greater pleasure of history must come, like the pleasure of poetry, from *how* the story is told; as when we see •a well drawn character in which we find the secret causes of a great variety of seemingly inconsistent actions; or •an interest of state laid open; or •a skillful policy laid out in detail, a policy that may lead to different and opposite actions according to the circumstances. All this reduces the whole to a unity—at least a unity of design. This can be seen even in the fables that entertain children, who otherwise can't be induced to enjoy them.

(7) What I have said will probably be accepted if in our inquiries into the universality of the sense of beauty two things are borne in mind :

- •There can be real beauty where there is not the greatest beauty.
- •There are infinitely many different forms that may all have some unity and yet differ from each other.

That's why men can have different fancies of beauty although uniformity is the universal basis for our approval of any form as beautiful. We'll find that that is how things stand in architecture, gardening, dress, equipage [see Glossary], and furniture of houses, even among the most uncultivated nations; where uniformity still pleases though it brings no advantage except the pleasure of experiencing it.

Diversity of judgments about ·the status of· our senses

(8) We form very different judgments, in similar cases, concerning the internal and external senses. Those who have followed Locke in shaking off the groundless opinion that we have innate ideas routinely claim that all our liking for beauty and order comes either from •prospect of advantage, •custom, or •education. Their only reason for this is the *variety* of likings and dislikings in the world, from which they infer that our likings and dislikings don't arise from any natural power of perception, i.e. from any sense. Yet everyone agrees that our •external senses are natural, and that the pleasures or pains of •their sensations—however much they are increased or lessened by custom or education and counterbalanced by ·self·-love—are really independent of custom, habit, education, or prospect of ·self·-interest. Yet there is certainly at least as great a variety of (dis)likings of *their* objects as of the objects of beauty; it is indeed *much more* difficult—it may even be impossible—to bring the (dis)likings of the •external senses to any general foundation at all, or to find any rule drawing the line between what is agreeable and what is disagreeable; and we all accept that •these are natural powers of perception.

The reason for it

(9) The reason for this difference of judgment has to be the fact that we have distinct names for the external senses, and few if any for the internal senses; and this leads us to regard the external senses as somehow more fixed and real and natural than the internal ones. (This isn't the only example of our inferring something about the world from facts about words.) We do have a name for the ·internal· sense of harmony, namely 'a good ear'; and we are generally brought to accept this as a natural power of perception (i.e. a sense) that is somehow distinct from hearing. ·We don't have a name for the internal sense of visual beauty, but· it is clearly the case that there is as necessary a perception of ·visible· beauty in the presence of regular objects as there is of harmony when we hear certain sounds.

An internal sense doesn't presuppose innate ideas

(10) Please take this in and remember it: an internal sense doesn't presuppose an innate idea or principle of knowledge, any more than the external senses do. Both are natural powers of perception; that is, each involves a determination of the mind to receive certain ideas from the presence of ·certain· objects. The internal sense is a passive power of

- •receiving ideas of beauty from any object in which there is uniformity amidst variety.

There's nothing problematic about this, any more than there is about the fact that the mind is always determined to

- •receive the idea of *sweet* when particles of a certain shape enter the pores of the tongue;

or about the fact that the mind is caused to

- •have the idea of sound whenever there is any quick undulation of the air.

In each case, there's no *connection* between the object and the idea; and the same power could with equal ease make those objects the occasion of those ideas.

Associations ·of ideas· cause disagreement

(11) The association of ideas that I mentioned in **(2)** and **(3)** of this section is one great cause of the apparent diversity among the deliverances of •the sense of beauty as well as among those of •the external senses. It often makes men dislike beautiful objects and like ones that have no beauty, but under different conceptions than those of beauty or ugliness. Here are some examples of such associations ·of ideas·. The beauty of trees, their cool shades, and the cover they give against being observed have made groves and woods the usual refuge for those who love solitude, especially to the religious, the thoughtful, the melancholy, and the amorous. And we join the ideas of •these dispositions of mind with •those external objects in such a way that they always recur to us along with them. The cunning of the heathen priests might make such shadowy places the scene of the fictitious appearances of their deities, leading men to join ideas of something divine to them. We see the same effect in the ideas of our churches, from their being perpetually used only in religious activities. The faint light in gothic buildings has had the same association with an idea that really has nothing to do with it, which our poet [Milton] shows in his phrase 'a dim religious light'. . . .

Another way in which music pleases

(12) For some people music has a charm that is distinct from its harmony, and is occasioned by its arousing agreeable passions. The human voice is obviously varied by all the stronger passions; now, when our ear detects any resemblance between the melody of a tune and the sound of the human voice in any passion, we feel ourselves touched by it and have melancholy, joy, gravity, thoughtfulness aroused in us by a sort of fellow-feeling or contagion. (This can happen with music that is sung or merely played on an instrument; and the operative resemblance can be in rhythm, modulation, or any other detail.) The same connection occurs between the melody of a tune and the words expressing any passion that we have heard that melody fitted to, so that they come to us together although only one of them affects our senses.

When such a variety of pleasing or displeasing ideas can be joined with forms of bodies or tunes, because •men are of such different dispositions and are subject to such a variety of passions, it's no wonder that •they often disagree in their likings and dislikings of objects, although they don't differ in the slightest in their sense of beauty and harmony. It's because many other ideas can please or displease a person according to his temperament and past circumstances. A wild country may be very agreeable to someone who spent the cheerful days of his youth in it, and very beautiful places can be disagreeable to him if they were the scenes of his misery. This may help us in many cases to explain the differences in (dis)liking without denying the uniformity of our internal sense of beauty.

(13) Grandeur and novelty are two ideas different from beauty, which often recommend objects to us. The reason for this lies outside the scope of the present work.. . . .

7. The power over our internal senses of custom, education, and example

(1) •Custom, •education [see Glossary], and •example are so often cited as the occasion [see Glossary] of our liking for beautiful objects, and of our *moral* approval of or delight in certain conduct, that I need to examine these three in detail so as to show that there is a natural power of perception—a natural sense—of beauty in objects that is independent of all custom, education, or example.

Custom gives no new sense

(2) Here is how custom operates. As applied to **actions**, all it does is to make the mind or body more easily disposed to perform actions that have been frequently repeated. It never leads us to view these actions in any way that wasn't open to us at first, ·before the custom was formed·; and it doesn't give us any new power of perception about them. We are naturally capable of sentiments of fear . . . .of any powerful presence; so custom can connect ideas of religious horror to certain buildings; but ·unaided· custom could never have given such ideas to a being who was naturally incapable of fear. If we had no way of perceiving or thinking about actions except in terms of whether they were advantageous or disadvantageous, all custom could do would be to make us quicker to perceive the advantage or disadvantage of actions. But this is not to my present purpose, ·and I mention it just as another example of custom's limited scope·.

Now for our approval of or delight in **external objects**. When the blood or spirits that anatomists talk about are aroused, quickened, or (in their lingo) 'fermented' in any agreeable way by medicine or food. . . ., it is certain that to keep •the body comfortable we will delight in objects of taste that aren't in themselves immediately pleasant to •it, if they promote the agreeable state that the body had been accustomed to. Custom can alter the state of the body in such a way that what at first created uneasy sensations will cease to do so, or perhaps raise another agreeable idea of the same sense; but custom can't ever give us any sensory idea different from those we had before: it will never make the blind approve objects as coloured, or make those who have no ·sense of· taste approve meats as •delicious, though they might approve them as •strengthening or exhilarating. If our glands and the parts near them were without feeling, if we got no pleasure from certain brisker motions in the blood, stimulating or intoxicating fluids or medicines would not be agreeable to us, and custom couldn't alter that. In the same way, if we had had no natural sense of beauty from uniformity ·amidst diversity·, custom couldn't have made us imagine any beauty in objects; if we had had no 'ear', custom couldn't have given us the pleasures of harmony. Once we have these natural senses, custom can enable us to extend our views further, and to receive more complex ideas of beauty in bodies or harmony in sounds—doing this by increasing our attention and quickness of perception. But however much custom may increase our power of receiving or comparing complex ideas, yet it seems to weaken rather than strengthen the ideas of beauty or impressions of pleasure from regular objects. If it didn't do so, no-one could go into the open air on a sunny day or clear evening and not engage in the most extravagant raptures, such as Milton attributes to Adam when we has first created. . . .

In the same way, custom can make it easier for a person to •see the use of a complex machine and •approve it as advantageous; but he would never have seen it as beautiful if he didn't have a natural sense of beauty. Custom can make

us quicker in grasping the truth of complex theorems, but we all find the pleasure or beauty of theorems as strong at first as ever [meaning 'as strong before custom kicked in as afterwards']. Custom improves our ability to retain and compare complex ideas, so as to discern more complex uniformities that novices in any art would overlook; but all this presupposes a natural sense of beauty in uniformity. . . .

Nor does education

(3) Education brings it about that:

- •We receive many speculative [see Glossary] opinions, some true and some false;
- •We're often led to believe that objects may be naturally apt to give pleasure or pain to our external senses, which in reality have no such qualities.
- •Sometimes by mere accident, sometimes by design, we are led to have in our minds strong but baseless associations of ideas, which are hard to break apart in later life.

Thus, some people grow up afraid of the dark, or averse to many kinds of food and to certain innocent actions; and baseless approvals are raised in the same way. But in all these activities education never makes us find in objects any qualities that we aren't equipped to perceive naturally through our senses. We know what •sickness of the stomach is, and may wrongly think that certain (in fact very healthful) foods will cause •it; through our sight and smell we receive disagreeable ideas of the food of pigs and their pigsties, and perhaps we can't prevent these ideas from coming back to us at the dining-table; ·but these and other good or bad effects of education need something to work on·: naturally blind men are never prejudiced against objects as having a disagreeable colour, or in favour of others as having a beautiful colour; they can •hear men dispraise one colour, and may •suppose this colour to be a sensible quality quite different from any that they have, but that is all; and in the same way, a man who doesn't have the sense of taste couldn't be educated into •having the ideas of taste or •being prejudiced in favour of steak as delicious; and if we had no natural sense of beauty and harmony, we could never be prejudiced in favour of this object as beautiful or that sound as harmonious. Education may make an inattentive Goth imagine that his countrymen have reached the perfection of architecture; and their hatred for their enemies, the Romans, may have in the minds of the Goths joined some disagreeable ideas even to the Romans' buildings, and incited them to demolish them; but if they hadn't had a sense of beauty in the first place, they would never have formed these prejudices. Did blind men ever debate whether purple or scarlet is the finer colour? or could any education prejudice them in favour of one colour against the other?

Thus education and custom can influence the internal senses *that we already have* by enlarging the capacity of our minds to retain and compare the parts of complex objects; and *then* if the finest objects are presented to us we become conscious of a pleasure far superior to what we get from common performances [see Glossary]. But all this presupposes that our sense of beauty is *natural*. •Instruction in anatomy and •observation of nature and of the facial expressions and bodily movements that accompany this or that sentiment [see Glossary], action, or passion may enable us to know a true imitation when we see one; but why would an exact imitation please us when we observe it if we didn't naturally have a sense of the beauty in it?

How prejudices are removed

(4) There's a point about the manner of rooting out the prejudices of education that is relevant to my present topic.

what Hutcheson wrote next: When the prejudice arises from associations of ideas without any natural connection, we must frequently force ourselves to bear representations of those objects, or the use of them when separated from the disagreeable Idea; and. . .

what he meant: If we have a prejudice against F things (which are harmless) because they are associated in our mind with G things (which really are nasty), and there's no natural connection between Fs and Gs, we should force ourselves •to confront representations of F things or to •use them in contexts where G things have no place; and. . .

. . . this may at last break the unreasonable association, especially if we can join new agreeable ideas to F things. Thus, superstitions are best removed by pleasant conversation with persons whose virtue we admire, or by observing that those people despise such opinions. What about prejudices arising from an anxious belief to the effect that some natural evil will accompany this object or result from that action? ·There are two variants of this, requiring different cures·. **(i)** If the evil is thought to be the constant and immediate upshot of X, **a few trials** in which X occurs and no harm is done will remove the prejudice (e.g. the prejudice against certain kinds of food). **(ii)** When the evil is thought of not as something that will always accompany X but merely as something that may possibly or probably at some time or other accompany X, this prejudice won't be removed without frequent reasoning with ourselves or else **a long series of trials** in which no harm is done. That's the situation with our fear of spirits •in the dark and •in church-yards. And when the evil is thought of as a long-delayed consequence, perhaps delayed until our life after death, that's the kind of prejudice that is hardest of all to remove. In this case there's no question of showing empirically that the prejudice is wrong; so the only way to remove it is through slow processes of reason. That's why it is so hard to root out superstitious prejudices against certain actions that are thought of as offensive to the Deity.

Example is not the cause of the internal sense

(5) Here is how example seems to operate. We are aware of acting very much for pleasure or private good; this leads us to think that others do so too; with the result that

- •we conclude there must be some perfection in the objects that we see others pursue, and evil in those that we observe them constantly shunning; or
- •the example of others may serve for us as trials to remove our fears of evil in objects to which we had an aversion.

But all this happens through our grasp of qualities perceivable by the senses that we have; no example will induce the blind or deaf to pursue objects as coloured or sonorous; and no example could draw us into pursuing objects as beautiful or harmonious if we didn't have a natural sense of beauty or harmony.

Example may make us •conclude without examination, that our countrymen have achieved the perfection of beauty in their works, or that there's less beauty in the kind of architecture or painting used in other nations, and so •content ourselves with very imperfect forms. And our fear of being scorned as lacking taste or intelligence often makes us join in approving the performances of the reputed masters in our country, and restrains those who have naturally a fine intelligence or very acute internal senses from working to achieve the greatest perfection; it makes also those who have bad taste purport to have a perception of beauty that they really don't have. But all this presupposes some *natural* power of receiving ideas of beauty and harmony. [Hutcheson adds some remarks about how the example of others—presumably trusted ones—may lead me to 'pursue' objects having some kind of perfection that I am aware of not knowing.]

8: The importance and the purposes of the internal senses

Importance of the internal senses

(1) The busy part of mankind may look on these things as airy dreams of an inflamed imagination, which should be despised by a wise man who rationally pursues more solid possessions that don't depend on this kind of reaction; but a little reflection will convince us •that the gratifications of our internal senses are as natural, real, and satisfying enjoyments as any sensible [see Glossary] pleasure whatsoever; and •that they are the chief goals for which we commonly pursue wealth and power. What good are wealth and power? How do they make us happy, or prove to be good to us? Simply by supplying gratifications to our senses, i.e. our faculties of perceiving pleasure. Only the external senses or faculties? No; anyone can see that a small portion of wealth or power will provide more pleasures of the external senses than we can enjoy; we know that scarcity often heightens these perceptions more than abundance, which cloys the appetite that is necessary to all pleasure. . . . A great fortune can be used for more good deeds and moral pleasures than a small one can; but *what else* can a large fortune do that a small one can't? The whole answer is: it can supply us with the pleasures of beauty, order, and harmony.

It is true indeed that the enjoyment of the noblest pleasures of the internal senses, in contemplating the works of nature, is open to everyone without expense; the poor and the low can have as free a use of these objects, in this way, as the wealthy or powerful. And even in objects that can be owned, ownership doesn't matter much to the enjoyment of their beauty, which is often enjoyed by others beside the owner. (But *some* objects of these internal senses require wealth or power to get the use of them as often as we want: this can be seen in architecture, music, gardening, painting, dress, equipage [see Glossary], furniture, of which we can't have the full enjoyment without ownership.) And there are some confused frames of mind that often lead us to pursue even objects that one can truly enjoy without owning them. These are the basic motives for our pursuit of greater degrees of wealth, where there are no generous intentions of virtuous actions.

This is confirmed by how the *enemies* of these senses usually behave. [Hutcheson presumably means '. . . the enemies of the pleasures of the external senses'] As soon as they think they have risen above the world, i.e. escaped from the onrush of greed and ambition, the ·human· nature that they have banished will return upon them and get them going in pursuit of beauty and order in their houses, gardens, dress, table, equipage. They are never content without some degree of this; and if we could look into their hearts we would see regularity, decency, beauty, as •what their wishes aim at, either for themselves or for their posterity, and as •what they always have in mind as the possible effects of their labours. Without this ·goal· they could never justify their pursuits to themselves.

It may sometimes happen that a person's human nature is so perverted that he is a thorough miser, who loves nothing but money, and whose goals are no higher than the cold dull thought of ownership; but this would be a rare isolated example, and not something to be used as a standard against which to judge mankind as a whole.

If we examine the pursuits of the luxurious [see Glossary] man, who in the opinion of the world is wholly devoted to his belly, we'll usually find that the far greater part

of his expense is employed to procure sensations other than those of taste—fine attendants, regular apartments, silver dinner-ware, and the like. Besides, a large share of the preparation is presumably designed for some sort of generous friendly purposes—e.g. to please acquaintance, strangers, parasites. [Those three words are Hutcheson's; note that he doesn't credit this man with having actual friends.] Not many people would be contented to enjoy the same sensations •alone, •in a cottage, or •out of clay jugs! These internal sensations may tend to be overlooked in our philosophical inquiries about the human faculties, but the fact is that they employ us more, and make more difference to our lives both for better and for worse, than all our external senses taken together.

What the internal senses are for

(2) As for the final causes [= 'purposes'] of this internal sense, let us distinguish the question that we seem to be incapable of answering:

> Is there for an almighty and all-knowing Being any real excellence in •regular forms, in •acting by general laws, in •knowing by theorems?

. . . .from two questions that we have some basis for answering:

> •What reasons are there—reasons worthy of the great Author of nature—for connecting regular objects with the pleasure that accompanies our perceptions of them?
>
> •What reasons might possibly influence Him to make the world everywhere full of regularity and uniformity, as it seems to us to be?

In preparation for answering these, bear this in mind: as far as we know concerning any of the great bodies of the universe, we see forms and motions that are really beautiful to our senses; and if we were placed on any planet the apparent courses ·of the other planets· would still be regular and uniform ·from our point of view· and therefore beautiful to our sense. This is a considerable reason to think that if the senses of the inhabitants of those planets are adapted to their habitations in the same way that ours are, and if what they see is like what we see here, their senses must be upon the same general foundation [Hutcheson's phrase] as ours.

Returning now to the questions: the following ·four· propositions contain what is needed to answer ·the former of· them:

(i) The manner of knowledge by universal theorems, and of operation by universal causes. . . .must be most convenient for beings with limited mental powers, because it saves them from being distracted in their thinking by the sheer number of propositions they have to deal with, and from toil and weariness in their powers of action. So when they reflect upon the apparent advantage of such methods their reason must approve of them, without making any call on their sense of beauty.

(ii) Objects that have uniformity amidst variety are more clearly and easily grasped and retained than irregular objects are; because the accurate observation of one or two parts often leads to the knowledge of the whole. . . . Thus,

> •from a side and solid angle we have the whole regular solid;
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> •measuring one side gives the whole square;
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> •one radius, the whole circle;
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> •two diameters, an oval;
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> •one ordinate and one abscissa, the parabola;

and so on with more complex figures that have any regularity and can be entirely determined and known in every part from a few data. [Hutcheson gives an example from architecture.] In contrast with this, it would take a long attention to a vast

multiplicity of parts to fix the idea of any irregular form, or give any clear idea of it, or make us capable of retaining such an idea. We can see this in the shapes of rough rocks and pebbles, and confused heaps, even when there aren't as many parts as the ·contrasted· regular shapes have; because such irregular objects distract the mind with variety, since for every sensible part we need a quite different idea.

(iii) From those two propositions it follows that beings with limited understanding and power, if they act rationally for their own ·self·-love, must choose to operate by the simplest means—to discover general theorems, and to study regular objects if they're as useful as irregular ones—so as to avoid the endless toil of producing each effect by a separate operation, of searching out each different truth by a different inquiry. . . .

(iv) Apart from this consideration of ·self·-love, there doesn't seem to be any necessary connection (independently of the constitution that the Author of nature has given us) between •regular forms, actions, theorems and •the sudden sensible pleasure aroused in us when we observe them even when we aren't thinking about the advantages of regularity that I have mentioned. Presumably the Deity *could* have constructed us so that we got no pleasure from such objects, or took pleasure in objects of a quite contrary nature. We have fair evidence for this in the beauties of various animals: they do indeed give *some* small pleasure to every one who views them, but each animal—·including man·—seems vastly more delighted with the special beauties of its own species than with those of a different one. . . . This makes it probable that the pleasure is not the necessary result of the form that gives the pleasure (if it were, it would equally affect all minds in all species), and that it comes from. . . .a choice that has been made by the supreme Agent who constituted our senses.

The reason for general laws

(3) Now I turn to the other question, which could be re-expressed like this:

> What reason might influence the Deity, who can't be distracted or wearied by doing many things at once, to choose to operate by simplest means and general laws, and to spread uniformity, proportion and similarity through all the parts of nature that we can observe?

Perhaps there's some real excellence that we don't know about in this manner of operation and in these forms; but it seems pretty safe to say that the divine goodness. . . .that has constituted our sense of beauty as it is at present has also determined the great Architect to adorn •this whole universe in a manner agreeable to the spectators, and •the part that is visible to men so as to be pleasant to *them*. This is especially credible if we suppose that God planned to reveal himself to men as wise and good, as well as powerful; for the art, wisdom, design, and bounty that he has spread throughout the earth constitutes strong evidence for this. How strong? Well, stronger than any evidence men can possibly have to support their confident assumption that the fellow-creatures they have dealings with in their everyday lives can be trusted—i.e. can think and give good advice, and have good-will towards them.

And there is a further reason for the Deity to operate by general laws—a reason having to do with a sense of ours that is superior to the senses I have discussed do far, namely the sense of •virtue, i.e. of •the beauty of action, which is the foundation of our greatest happiness. If nature didn't work by general laws, men couldn't plan prudently, have reasonable expectations of effects from causes, or develop plans of action. . . . So if we are so built that our greatest happiness must depend on our actions (and I think it may be shown that it does), the universe must be governed not

by individual acts of will but by general laws on which we can base our expectations and project our schemes of action. ·Some of the effects of the general laws are pretty brutal, and· one might wonder why this isn't the situation:

> General laws ordinarily obtain, but God usually stops their effects whenever this is necessary to prevent any particular evils.

Why not? Because that would supersede all human prudence and care about actions, as men could always comfort themselves with the thought 'If things go badly enough, God will step in and save the day'.

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This, verbatim, is the argument that was skipped over on page 25:

But then it is also plain that there are an infinity of different sensibly dissimilar trapezia, even of the same area, according as we vary a side by one tenth, two tenths, three tenths, and so on, and vary the angles and another side so as to keep the area equal. Now in each of these infinite degrees of sensible dissimilitude the several tenths are infinitely divisible as well as in the first case; so that the multitude of sensible dissimilarities are to the multitude of insensible dissimilarities under apparent resemblance, still as the second power of infinite to the first, or as infinite to unity.