

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

Francis Hutcheson

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[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.

Preface

[This was the Preface not only for this work but also for Hutcheson's *Inquiry into the Origin of our Ideas of Virtue or Moral Good*. The two works were published together as a linked pair.]

No part of philosophy is more important than a sound knowledge of human nature and its various powers and dispositions. There has recently been a great deal of investigation of our understanding and of the various methods of obtaining truth. It is generally agreed that the importance of any truth is simply its power to make men happy or to give them the greatest and most lasting pleasure; and 'wisdom' names the ability to pursue this goal by the best means. So it must surely be of the greatest importance to have clear conceptions of this goal itself and of the means necessary to obtain it, so that we can discover which are the greatest and most lasting pleasures, rather than wasting our highly trained reason in trivial activities. In fact, I am afraid that if we don't follow this line of inquiry most of our studies will be of very little use to us. Why? Because they don't seem to aim at anything much except the mere acquisition of speculative [see Glossary] knowledge itself. No-one has clearly explained how knowledge or truth can bring us pleasure.

That is what started me on an inquiry into the various pleasures that human nature is capable of receiving. In our modern philosophical writings we don't find much about this except for •a mere classification of them into 'sensible' [see Glossary] and 'rational', and •some trite commonplace arguments to prove that rational pleasures are more valuable than sensible ones. Our sensible pleasures are skated over, and explained only by some examples of tastes, smells, sounds etc. that are generally regarded by thoughtful people as very trivial satisfactions. And our rational pleasures have

been treated in much the same way. We are seldom given any notion of *rational pleasure* that goes beyond the notion we have when we think about our possession. . . .of things that may give rise to pleasure. We call such things 'advantageous'; but we can't get a clear concept of *advantage*, i.e. of what is in our interests, until we know

- what pleasures are apt to be provided by advantageous objects [see Glossary], and
- what senses, i.e. powers of perception, we have with regard to such objects.

We may be surprised by how important this inquiry will turn out to be in morals, where it will show that •virtue is something real, and that •it is the surest happiness of the agent.

Our experience of our external senses shows us clearly that our perceptions of pleasure or pain don't depend directly on our will: objects don't please or displease us according to whether we *want* them to do so. [Hutcheson is here discussing pleasure and pain received through our *external* senses, so the 'objects' [see Glossary] in question in this paragraph are material objects.] The presence of some objects necessarily pleases us, and the presence of others equally necessarily displeases us. The only way we can voluntarily get pleasure or avoid pain is by procuring objects of the pleasing kind and avoiding objects of the displeasing kind. It's because of the basic way we are built that one sort lead to delight and the other to dissatisfaction.

This holds equally for all our other pleasures and pains. We do have others, because many other sorts of objects please or displease us as necessarily as do material objects do when they operate on our sense-organs. Almost every object that comes before our minds is the occasion [see Glossary] of some pleasure or pain. Thus we find ourselves pleased with a regular form, a piece of architecture or painting, a composition of notes, a theorem, an action, an affection [see Glossary], a character. And we're aware that this pleasure arises necessarily from contemplating the idea that is then present to our minds, with all its details, although some of these ideas have nothing of what we call sensible perception in them; and in those that do involve sense-perception the pleasure arises from some uniformity, order, arrangement, imitation—not from the simple ideas of colour, or sound, or shape etc. separately considered.

My name for these determinations [see Glossary] to be pleased with forms or ideas that we become aware is 'senses'. To distinguish them from the powers that are ordinarily called by that name, I'll call our power of perceiving the beauty of regularity, order, harmony, an 'internal sense', and the determination to be pleased with the contemplation of the affections, actions, or characters of rational agents that we call 'virtuous' I'll give the name 'moral sense'.

My main purpose is to show that human nature was not left quite indifferent in matters of virtue, i.e. was not left with no immediate and instinctive reactions to good and to bad behaviour. If we had nothing of that kind, we would have to make our own observations regarding the advantage or disadvantage of actions, and to regulate our conduct accordingly. The weakness of our reason and the distractions caused by the infirmity and the necessities of our nature are so great that few men could ever have conducted the long inferences that show some actions to be on the whole

advantageous to the agent and their contraries pernicious. The author of nature has equipped us better for virtuous conduct than our moralists seem to imagine, by giving us *instructions* for it, ones that are almost as quick and powerful as the instructions we have for the preservation of our bodies. He has made virtue a *lovely* form, to spur us to pursue it, and has given us strong affections to serve as the springs of each virtuous action.

This *moral sense* of beauty in actions and affections may seem strange at first view. Some of our moralists themselves are offended by its appearance in Lord Shaftesbury's writings, for two reasons. •They are accustomed to deduce every approval or disapproval from rational views of what is in our interests. . . . And •they think that the notion of a moral sense comes close to the notion of *innate ideas*, of which they have a horror. In my second treatise, on Virtue, I'll show that this moral sense has nothing to do with innate ideas.

Our gentlemen of good taste can tell us of a great many senses, tastes, and likings [see Glossary] for beauty, harmony, imitation in painting and poetry; and mightn't we also find in mankind a liking for a beauty in characters, in ways of behaving? I suspect that our foolish management of philosophy (as well as religion) has made it so austere and unshapely that a gentleman can't easily bring himself to *like* it; and those who are strangers to it can scarcely bear to hear our description of it. What a change from what was once the delight of the finest gentlemen among the ancients—their *recreation* after the bustle of public business!

In the first treatise—the one on Beauty—I may sometimes assume a greater agreement of mankind in their sense of beauty than experience will confirm; but all I care about is to show

- that some sense of beauty is natural to men;
- that we find as much agreement in men's likings of

forms as in their external senses (which everyone agrees to be natural); and

•that pleasure or pain, delight or aversion, are *naturally* joined to men's perceptions.

If you are convinced about the mind's determination to be pleased with forms, proportions, resemblances, theorems, it won't be difficult for you to grasp the ideas of another sense, a superior one that is also natural to men, determining them to be pleased with actions, characters, affections. This is the *moral sense*, which is the subject of the second treatise.

The regular occasions [see Glossary] of perception by the external senses are presented to us as soon as we come into the world, and it may be this that makes it easy for us to regard these senses as natural; but the objects of the superior senses of beauty and virtue generally don't crop up as early as that. It probably takes a while for children •to reflect (or anyway to let us know that they reflect) on proportion and similarity, on affections, characters, temperaments, or •to come to know the external actions that are evidences of these. This leads us to imagine that their sense of beauty, and their moral sentiments [see Glossary] concerning actions, must be entirely a product of instruction and education [see Glossary]; •but that's a weak basis for that conclusion. It's no harder to conceive •how a character or temperament might be *constituted by nature* as the necessary occasion of pleasure or object of approval than to conceive •how a taste or a sound might have that same status, despite the fact that the character or temperament isn't presented to the child as

early in life as tastes and sounds are.

[Hutcheson now has three paragraphs gratefully praising three people who have supported him and given him useful criticisms of the two treatises' first editions. Only the third person need concern us here:]

There's no need for me to recommend Lord Shaftesbury's writings to the world: they will be admired as long as any careful thought remains among men. It is indeed to be wished that he hadn't mixed his noble performances [see Glossary] with some prejudices that he had against Christianity—a religion that gives us the truest idea of virtue, and recommends the love of God and of mankind as the sum of all true religion. Imagine that able nobleman finding a dissolute set of men who enjoy nothing in life but the lowest and most sordid pleasures, searching in Shaftesbury's writings for insinuations against Christianity so that they can be even less restrained in their debaucheries, although their low minds are incapable of savouring the noble sentiments of virtue and honour that he has placed in such a lovely light. How indignant that would have made him!

Whatever faults able people may find with this performance of mine, I hope that no-one will find anything in it contrary to religion or good conduct; and I'll be well pleased if I give the learned world an occasion for examining more thoroughly these subjects that I think are of very considerable importance. My main basis for confidence that my views are mainly correct is that the first hints of them came to me from some of the greatest writers of antiquity. . . .

1: Some powers of perception —distinct from what is generally understood by ‘sensation’

I shall start with something that may be needed to make the rest intelligible, namely some definitions and observations regarding •the perceptions we call ‘sensations’ and •the actions of the mind that they lead to. The observations are all truths that are either accepted by everyone or sufficiently proved by many writers both ancient and modern.

Sensation

(1) The ideas that are raised in the mind when external objects are present to us and act on our bodies are called ‘sensations’. We find that in such cases the mind is passive: it has no power directly to prevent the perception or idea, or to alter it as it occurs, as long as our bodies remain in a state fit to be acted on by the external object.

Different senses

(2) We say that two perceptions come to us through ‘different senses’ if they are entirely different from each other, having nothing in common except *being sensations*. Thus, ‘seeing’ and ‘hearing’ refer to the different powers of receiving the ideas of colours and of sounds. It’s true that colours have vast differences among themselves, as also have sounds; but even the most opposite colours have more in common than any colour has with any sound. . . . Each of the various senses seems to have its distinct organs, except feeling [= ‘the] sense of touch’, which is to some extent diffused over the whole body.

How the mind is active

(3) The mind has a power to

- take ideas that were received separately and put them together to make compounds;

- compare [see Glossary] their objects by means of the ideas, and note their relations and proportions;
- enlarge or shrink its ideas as it wishes, to any degree;
- take simple ideas that were jointly impressed in the mind in the sensation, and consider them separately.

The common name for this last operation is ‘abstraction’.

Substances

(4) The ideas of •substances are compounded out of the various simple ideas that were jointly impressed •on the mind• when •they presented themselves to our senses. We define substances only by listing these sensible ideas. Someone who has never directly encountered a substance of kind K can be given a clear enough idea of K by a definition, provided he has separately received through his senses each of the simple ideas that make up the complex idea of K. But not otherwise: he can’t get through a definition any simple ideas that he hasn’t received through his senses. . . .

Education. Instruction

(5) It follows from this that if someone x has a desire (or aversion) toward some object, this attitude must be based on x’s opinion that the object has some desirable (or undesirable) quality that x is sensorily equipped to perceive. If a blind man desires beauty, the desire must be aroused by some perceived regularity of shape, sweetness of sound, smoothness or softness or some other quality perceivable by the other senses, having nothing to do with the ideas of colour. This holds for any desire (or aversion), whether produced by instruction, education, or prejudice.

Pleasure. Pain

(6) Many of our sensitive perceptions are *immediately* pleasant (or painful), without our

- knowing what caused this pleasure (or pain) or how its object caused or was the occasion of it; or
- seeing what further benefit (or harm) we might receive from the use of such objects.

The most detailed knowledge of these things wouldn't make any difference to the pleasure (or pain) of the perception, though it might •provide a rational pleasure—the pleasure of gaining new knowledge—distinct from the sensible pleasure, or •create a distinct joy from the prospect of further benefits (or aversion from the thought of further harm).

Different ideas

(7) When two people disagree in their approval or dislike of some one object, there is probably some difference between them in what ideas the object creates in them; and when one person moves from liking something to later disliking it, this is usually because some disagreeable idea has been occurring when that object is presented, though the idea in question isn't essentially connected with the object. Examples of this are provided by this sort of case: a man takes an emetic preparation that includes a wine he used to like, and from then on he hates that wine because the •gustatory-idea he gets from drinking it has had added to it ideas of loathing and sickness of stomach. A similar change of idea [Hutcheson's phrase] can happen gradually through changes in our bodies—as when in our later years we don't care for foods that we were fond of in our childhood, or when we come to enjoy something by blocking the disagreeable ideas that it aroused when we first used it. •And a quite separate point: Many of our simple perceptions are disagreeable only because the quality is too intense: moderate light is agreeable, very strong light may be painful; moderate

bitterness may be pleasant, a higher degree may be offensive. A change in our organs may cause a change in the intensity of the perception, and sometimes it goes further and occasions a quite contrary perception: as when a bowl of tepid water feels cold to a warm hand and warm to a cold one.

We may find it harder to account for the diversity of fancy [Hutcheson's phrase] about more complex ideas of objects, in which we have to do with many ideas of different senses at once. . . . For instance, in the different fancies about architecture, gardening, clothing. I'll say something about the first two of those in Section 6. As for clothing: the differences in tastes about that can also be attributed to the influence of ideas about other things that somehow become joined with ideas of clothing. Examples:

- Someone dislikes glaring colours because something. . . has led him to think that a liking for such colours is evidence of frivolity (or whatever);
- Some colour or clothes-design is disliked because it is commonly used by peasants or other low-down people.

These additional ideas—•*frivolous*, •*peasant*—may constantly accompany some idea of •colour or •fashion in the minds of some people, causing *in them* a constant dislike for •it, although the colour or form in question is in no way disagreeable in itself, and actually pleases others who join no such ideas to them. Mightn't it be the case that human minds differ in such a way that one simple idea or perception gives pleasure to one person and pain to another, or to one person at different times? There seems to be no evidence that that's the case—and anyway it seems like a *contradiction* to suppose that one simple idea should do this.

Complex ideas

(8) The only pleasure of sense that our philosophers [Hutcheson's phrase] seem to consider is the kind that accompanies the •simple ideas of sensation: but there are vastly greater pleasures in the •complex ideas of objects that are called 'beautiful', 'regular', 'harmonious'. Everyone knows that he is more delighted with a fine face or a well-drawn picture than with the view of any one colour, however strong and lively it is; and more pleased with a view of

the sun arising among clouds, colouring their edges,
a starry sky,
a fine landscape,
a shapely building

than with a view of a clear blue sky, a smooth sea, or a large open plain that isn't diversified by woods, hills, waters, buildings (though even these latter appearances are not perfectly simple). Thus in music the pleasure of a fine composition is incomparably greater than that of any one note, however sweet, full, or swelling it may be.

'Beauty', 'Harmony'

(9) In this work I shall use the word 'beauty' to name •the idea that is raised in us, and the phrase 'the sense of beauty' to name •our power of receiving this idea. 'Harmony' also refers to •our pleasant ideas arising from a complex of sounds, and 'a good ear' (in its ordinary colloquial sense) to •our power of perceiving this pleasure. I shall try in what follows to discover what is the immediate occasion [see Glossary] of these pleasant ideas, i.e. what real quality in the objects ordinarily arouses them.

Internal sense

(10) These ideas of beauty and harmony—should we call them perceptions of the external senses of seeing and hearing? It doesn't matter. I *prefer* to call our power of perceiving

these ideas 'an *internal sense*', if only to distinguish them from other sensations of seeing and hearing that men can have without any perception of beauty and harmony. We know very well from experience that the following two things can be true of the same person:

- (1) He has good enough senses of seeing and hearing (in the ordinary sense of those words); he perceives all the simple ideas separately, and has the pleasures they can give; he can distinguish one from another. . . .; he can tell in separate notes which note is higher, lower, sharper or flatter, when they are separately sounded; in shapes he sees the length, breadth, width of each line, surface, angle; and he is as capable as anyone of hearing and seeing at great distances. And yet
- (2) he gets no pleasure from musical compositions, from painting, architecture, natural landscape; or only a very weak one compared with what others enjoy from the same objects.

When someone has a greater capacity for receiving such pleasant ideas we say that he has 'fine taste'; in music it seems that we all accept that there's something like a sense that is distinct from the external sense of hearing, and we call it a 'good ear'. . . .

Different from external sense

(11) We generally imagine the lower animals to have powers of perception of the same sort as our external senses, and sometimes to have them more acutely than we do; but we don't conceive of many, if any, of them as having any of the more elevated powers of perception that I am calling 'internal senses'; and if any of them do have them, it is in a much lower degree than we do.

Later on I shall present another reason for calling this power of perceiving the ideas of beauty an 'internal sense', namely the fact that sometimes in contexts where our ex-

ternal senses are not much involved we detect a sort of beauty that is in many ways similar to the beauty observed in sensible [see Glossary] objects, and accompanied with similar pleasure—for example, the beauty perceived in theorems, or universal truths, in general causes, and in some extensive principles [see Glossary] of action.

We generally think of the lower animals as having powers of perception that are of the same sort as our external senses, and sometimes sharper than ours; but we don't think of many—or even of *any*—of them as having any of the more lofty powers of perception that I am calling 'internal senses'. And if some of them *do* have such powers, they have them in a much lower degree than we do.

(12) Think about the perceptions that must occur when a poet is swept away by the view of any of those objects of natural beauty that capture us even in his description of them and when the same objects are perceived by someone who lacks what we call a 'fine taste'—a dull critic or a narrowly focused scientist.

What a difference! The latter class of men may have much more knowledge of the kind that is derived from external sensation; they can tell all the specific differences of trees, herbs, minerals, metals; they know the form of every leaf, stalk, root, flower, and seed of all the species, about which the poet may know almost nothing; but their conception of what they see is cold and lifeless, whereas the poet's is utterly delightful—and not only the poet but any man with fine taste. Our external senses may (with the aid of tape-measures) teach us all the proportions of architecture to the tenth of an inch, and the location of every muscle in the human body; and a good memory may retain these; but more than that is needed if one is to be

- an accomplished master in architecture, painting or sculpture, or even
- a reasonably good judge of such works, or
- capable of getting the highest pleasure from contemplating them.

Since •there are such different powers of perception where the external senses (as commonly so-called) are the same; and •since the most detailed knowledge of what the external senses reveal often doesn't give the pleasure of beauty or harmony that can be immediately enjoyed by a person with good taste who doesn't have much knowledge; we're entitled to give another name to these higher and more delightful perceptions of beauty and harmony, using the phrase 'internal sense' as a label for the power of receiving such impressions. The difference of the perceptions seems to justify the use of a different name. . . .

Its pleasures are necessary and immediate

(13) This superior power of perception is appropriately called a 'sense', because of its likeness to the other senses in this respect: rather than arising from any knowledge of principles, proportions, causes, or of the usefulness of the object, our pleasure comes from our being *immediately* struck by the idea of beauty. And this pleasure isn't increased by the most detailed knowledge of the object, though it may add a *further* pleasure, a rational pleasure, from prospects of benefit from the object or from the increase of knowledge. [See **(6)** on page 5.]

(14) Also, the ideas of beauty and harmony, like other sensible ideas, are **necessarily** pleasant to us as well as being **immediately** so. We can't vary the beauty or ugliness [see Glossary] of an object by any decision we make or by any expectation that the object will be good for us or bad for us. . . . Offer us the whole world as a reward for approving

an ugly object or disapproving a beautiful one, or threaten us with the greatest evil [see Glossary] if we don't—it won't make any difference. Rewards and threats might make us *pretend*, or might get us in our external conduct to •abstain from any pursuit of the beautiful and to •pursue the ugly; but our feelings and perceptions would still be the same.

This sense is independent of expectations of advantage

(15) This makes it clear that some things are *immediately* the occasions of this pleasure of beauty. . . , and that this pleasure is different from the joy that arises from self-love when we expect something good to come to us. Indeed, don't we often see someone neglect his own comfort and convenience in order to obtain beauty, with no expectation of gaining from the beautiful thing anything except the enjoyment of its beauty? This shows us that although we may pursue beautiful objects from self-love, wanting to obtain the pleasures of beauty (as in architecture, gardening, and many other pursuits), this couldn't happen if we didn't have a sense of beauty that precedes thoughts of advantage, even *this* advantage; if we didn't have that sense, these objects wouldn't be advantageous in that way because they wouldn't give us the pleasure that makes them advantageous. Our *sense of* the beauty of objects that makes them good to us is quite distinct from our *desire to have* them when they are good in this way. Our •desire for beauty may be outweighed by rewards or threats, but never our •sense of it; just as fear of death or love of life may make us choose and want a bitter potion. . . , but no prospects of good or evil can stop that potion from being bitter. . . . It's true that people will often forgo the pursuit of beauty and harmony because they are greedy for other things, or lazy, or for some other motive of self-love, but that doesn't show that we have no sense of beauty—merely that it can be outweighed by a stronger desire. Gold is heavier than silver, but no-one takes

that as a proof that silver is weightless!

(16) If we had no such sense of beauty and harmony, houses, gardens, clothing, equipage [see Glossary] might be praised as convenient, fruitful, warm, easy, but never as beautiful; and I can't see in faces anything that would please us except liveliness of colour and smoothness of surface. But it is perfectly certain that all these objects are recommended in quite different terms on many occasions. . . .

Beauty, original or comparative

(17) Beauty is either •original or •comparative; or, if you prefer this terminology, •absolute or •relative. Don't take 'original' or 'absolute' beauty to be a quality that the object itself has in such a way that it could be beautiful independently of any relation to a mind that perceives it. The fact is that 'beauty', like other names of sensible ideas, strictly refers only to the perception of some mind; just as 'cold', 'hot', 'sweet', 'bitter', refer to sensations in our minds that may have no resemblance to anything in the objects that arouse these ideas in us, however apt we are to imagine something in the object is just like our perception. The ideas of beauty and harmony that are aroused when we perceive some primary [see Glossary] quality. . . . may indeed have more resemblance to •external• objects than do these sensations that seem to be not so much •pictures of objects as •states of the perceiving mind; but if there were no mind with a sense of beauty to contemplate objects, I don't see how they could be called 'beautiful'. By 'absolute beauty', then, all I mean is 'beauty that we perceive in an object without comparing it with anything else of which it is supposed to be an imitation or a picture—for example the beauty perceived from [Hutcheson's preposition] the works of nature, artificial forms, figures, theorems. Comparative or relative beauty is the beauty we perceive in objects that are generally regarded as imitations or resemblances of something else.

This classification of beauties is based on the different reasons for the pleasure we get from objects rather than from anything in the objects themselves; for most of my examples of relative beauty have absolute beauty as well; and many of the examples of absolute beauty also have

relative beauty in some respect or other. But we can think separately about these two sources of pleasure—•uniformity in the object itself and •resemblance to some original. These two kinds of beauty occupy the next three sections.

2: Original or absolute beauty

Sense of men

(1) Since it is certain that we have ideas of beauty and harmony, let us examine what quality in objects arouses these ideas or is the occasion of them. The inquiry will only be about the qualities that are beautiful *to men*, i.e. about the foundation of *their* sense of beauty. . . . When I come to show how the objects that are presented to us are beautiful, I will mean that such objects are agreeable to the sense of men. There are plenty of objects that don't strike men as in any way beautiful but bring delight to a variety of other animals. Perhaps the senses of those animals are constituted differently from human senses; perhaps they have ideas of beauty that are aroused by objects of a quite different form from the ones we find beautiful. We see animals fitted for every place; and what to men appears rough and shapeless, or loathsome, may be to them a paradise.

(2) So as to get a clearer over-all view of the foundation or occasion of men's ideas of beauty we should consider it first in its simpler kinds, e.g. the simple beauty of some regular figures. Perhaps we'll find that the same foundation extends to all the more complex kinds of beauty.

Uniformity with variety

(3) The figures that arouse the ideas of beauty in us seem to be the ones that have uniformity amidst variety. Many thoughts of objects are *agreeable* on other accounts, such as grandeur, novelty, holiness, and some others that I'll talk about later. But what we call *beautiful* in objects seems to be (to put it in mathematical terms) a *compound ratio* of uniformity and variety: of two bodies that are equally uniform, the more beautiful is the one with more variety; and of two bodies that are equally variegated, the more beautiful is the one that is more uniform. Some examples will make this clear.

Variety

Where uniformity is the same, variety increases beauty. The beauty of an equilateral triangle is less than that of a square, which is less than that of a pentagon, which is surpassed in its turn by the hexagon. Similarly with solids: the icosahedron (with twenty sides) surpasses the dodecahedron (with twelve); and this surpasses the octahedron, which is still more beautiful than the cube, which in turn surpasses the regular pyramid. The obvious basis for all this is greater

variety with equal uniformity. (There are limits to this: when the number of sides is very large, we can't see how they relate in size to the diameter of the figure or of the obviously related circle, so that the beauty in such a case doesn't go on increasing with the number of sides. And there are exceptions: the lack of parallelism in the sides of heptagons and other figures with odd numbers of sides may diminish their beauty.)

Uniformity

Where variety is equal, greater uniformity increases the beauty. An equilateral triangle (three equal sides) or even an isosceles triangle (two equal sides) surpasses in beauty a scalene triangle (all three sides different). A square surpasses a rhombus (two sides of one length and two of another), which is more beautiful than the trapezium (no two sides the same) or any figure with irregular curved sides. So any regular solid *x* is much more beautiful than an irregular solid *y* that has the same number of plane surfaces as *x*; and this can be seen not only in the five perfectly regular solids but in all the ones that have any considerable uniformity—like cylinders, prisms, pyramids, obelisks—which please every eye more than any rough shape in which there is no unity or resemblance among the parts.

Compound ratio

We get examples of the compound ratio when we compare **(a)** circles or spheres with **(b)** ellipses or fairly regular spheroids [= 'figures that are not far from being spheres']. In this comparison we find that the lack of perfect uniformity observable in **(b)** is made up for by its greater variety, so that **(b)**'s beauty is nearly equal to **(a)**'s. And we get a similar result when we compare **(b)** compound solids [he names two of them] with **(a)** the perfectly regular ones of which they are compounded. [This paragraph has rectified Hutcheson's version, which is garbled.]

(4) These remarks would probably hold true for, and be confirmed by, the judgments of children concerning simpler figures where the variety isn't too much for them to take in. Some of my particular examples may seem uncertain, but there's no escaping the fact that children are fond of all regular figures in their games although they are no more convenient or useful for them than the figures of ordinary pebbles. Children *early* reveal a taste or sense of beauty when they want to see buildings, regular gardens, or even pictures of them.

The beauty of nature

(5) It's the same foundation that we have for our sense of beauty in the works of nature. In every part of the world that we call 'beautiful' there's a vast uniformity amidst an almost infinite variety. Many parts of the universe seem not to be designed for our use; indeed, it's only a tiny part of the universe that we even know anything about. The figures and motions of the great heavenly bodies are not obvious to our senses; we learn about them by reasoning and theorising on the basis of many long observations; and yet as far as we can

discover through our senses,
enlarge our knowledge by reasoning, or
stretch our imagination to regions that we don't know
about.

we generally find that the structure, order, and motion of those bodies pleases our sense of beauty. It's not true that every individual natural object strikes us as beautiful; but there's a vast profusion of beauty over most of the objects that our senses present to us or that we reach by reasoning on the basis of observation. . . . The forms of all the great bodies in the universe are nearly spherical; the orbits of their revolutions are generally elliptical, and without great eccentricity [= 'in ellipses that are not very different from circles']. . . .

These are figures of great uniformity, and are therefore pleasing to us.

Then consider the superb example of uniformity amidst variety that our planets provide. . . . **(i)** They rotate on their axes, and move around the central fire (the sun), in nearly equal times and in nearly the same orbit; so that after certain periods all the same appearances are again renewed. **(ii)** There's a succession of light and shade, or day and night, constantly pursuing each other around each planet, with an agreeable and regular diversity in the times they occupy the different hemispheres, in the summer, harvest, winter and spring. **(iii)** And then there are the various phases, aspects, and situations of the planets in relation to each other, their conjunctions and the oppositions in which they suddenly darken each other. . . .in eclipses, are repeated to us at their fixed periods with invariable constancy. These are the beauties that charm the astronomer, and make his laborious calculations pleasant.

The earth

(6) Then there's the dry part of the surface of our globe: much of it is covered with 'green', a very pleasant inoffensive colour; and how beautifully is it variegated with different degrees of light and shade, according to the different situations of the parts of its surface, in mountains, valleys, hills, and open plains, which are variously tilted towards the great light-giver!

Plants

(7) If we descend to the tiniest works of nature, what vast uniformity there is among all the species of plants. . . .in how they grow and propagate! What an exact resemblance there is among all the plants of the same species, whose numbers surpass our imagination! And this uniformity is matched—indeed it is sometimes surpassed—in the structure of the

minutest parts of plants, which no eye can see without a microscope. In the almost infinite multitude of leaves, fruit, seed, flowers of any one species we often see an exact uniformity in the structure and situation of the smallest fibres. this is the beauty that charms an intelligent botanist. [Hutcheson goes on at some length about other beauties of regularity that come our way when we put individual leaves or flowers under a microscope, about tree-rings 'one for each year', and so on.]

Animals

(8) As for the beauty of animals, either in their outward form or their inner structure that we learn about through experiment and long observation, we shall find among all known species a vast uniformity in the structure of the parts on which life more immediately depends. And consider the amazing unity of *mechanism* underlying an almost infinite diversity of animal motions:

- all their actions in walking, running, flying, swimming;
- all their serious efforts for self-preservation,
- all their freakish contortions when they are playing

—all this, in all their various limbs, are performed by one simple contrivance of *a contracting muscle* applied with inconceivable variations to produce all these results! The work could have been done by a number of different engines; but then there would have been less uniformity, and the beauty of our animal systems (and of particular animals) would have been much less when this surprising unity of mechanism had been removed from them.

(9) Among animals of the same species, the uniformity is very obvious, and this resemblance is the basis on which we classify them into classes or species, despite the great differences of size, colour, and shape that are found even

in those that we put into the same species. And then in each individual animal, what vast beauty arises from the exact resemblance to each other of all the external double members! This seems to be nature's the universal intention when no accident prevents it. The lack of this resemblance always counts as an imperfection and a lack of beauty, even though no harm comes of it—as when the eyes are not exactly alike, or one arm or leg is a little shorter or thinner than its fellow. . . .

Proportion

(10) A further beauty in animals arises from the proportions of the various parts to each other; this pleases the sense of spectators, even though they cannot calculate it with the accuracy of a sculptor. The sculptor knows what proportion •of each part of the face to the whole face is most agreeable, and similarly with the proportion •of the face to the body or to any parts of it, and of •the diameter to the length of each limb. When the proportion of the head to the body is noticeably altered, we have a giant or a dwarf. That's how it is that a sculpture of any size can represent a giant or a dwarf, by making the head disproportionately small (in giants) or large (in dwarfs). There's a further beauty arising from the bodily shape that naturally indicates strength; but I shan't insist on this, because it will probably be alleged that our approval of this shape comes from our thought of the advantage •of strength• rather than from the form itself.

There's beauty arising from any mechanism that seems to be adapted to the needs and advantages of some animal; this pleases us, although it doesn't bring any advantage to ourselves. I'll consider it under heading of 'relative beauty' or 'design' [see Section 5, starting on page 20].

Birds

(11) The special beauty of birds can hardly be omitted! It

comes from •the vast variety of feathers, which are intricate machines adapted to many admirable uses, and are strikingly alike in structure across all the species; from •the perfect uniformity of parts—•beak to beak, tail to tail—•in those of the same species; and from the likeness of the two sides of each individual bird; besides all the beauty of lively colours and gradual shades, not only in the external appearance of the bird. . . .but often visible even in one feather separately.

Fluids

(12) If our reasonings about the nature of fluids are sound—•i.e. if current scientific orthodoxy about fluids is correct—•then the vast stores of water provide an unimaginably fine example of uniformity in nature. Think about the almost infinite multitude of small, polished, smooth spheres that we have to think are formed in all the parts of this planet. And there is probably the same uniformity among the parts of other fluids as well as water; and something similar must be found in many other natural bodies—salts, sulphurs, and such like—whose uniform properties probably depend on a uniformity in the shapes of their parts.

Harmony

(13) Under 'original beauty' we can include harmony, or—if you'll allow me the phrase—*beauty of sound*. •That beauty is original• because harmony isn't usually thought of as an imitation of anything else. Harmony often raises pleasure in people who don't know what is causing it; and yet the foundation of this pleasure is known to be a sort of uniformity. When the various vibrations of one note regularly coincide with the vibrations of another, they make an agreeable composition; and such notes are called 'concorde'. [Hutcheson gives some details about the mathematical relations involved in concords. Then:] In addition to this, a due regard must be

had to the key that governs the whole thing, and to the tempo and style [e.g. *largo*, *molto espressivo*] in which the composition is begun: frequent clumsy changes in any of these will produce the greatest and most unnatural discord. You can tell this by observing the dissonance that would come from tacking parts of ·two· different tunes together as one, although both were separately agreeable. . . .

Yet we find in the best compositions a mysterious effect of *discords*: they often give as much pleasure as continued harmony. Perhaps they do this

- by refreshing the ear with variety; or
- by awakening the listener's attention and increasing his enjoyment of the subsequent harmony of concords, as shadows enliven and beautify pictures; or

- by some other means that we don't yet know.

Anyway, it is certain that discords have their place, and have a good effect in our best compositions. I'll discuss some other powers of music later on [(12) on page 32]

(14) In all these examples of beauty, the pleasure is communicated to observers or listeners who have never given any thought to this general foundation. All I'm saying here is that the pleasant sensation arises only from objects in which there is uniformity amidst variety: we can have the sensation without knowing what is the occasion [see Glossary] of it; as a man's taste may suggest ideas of sweets, acids, bitters, though he knows nothing about the forms or motions of the small bodies that arouse these perceptions in him.

3: The beauty of theorems

Theorems

(1) the beauty of theorems, i.e. demonstrated universal truths, deserves to be separately considered, because it is considerably different from the kinds of beauty I have discussed; and yet there are none in which we'll see such an amazing variety with uniformity—which leads to a very great pleasure owing nothing to any prospect of further advantage.

(2) We may find included in one theorem. . . .an infinite multitude of particular truths—often, indeed, an infinity of infinities of them. ·There may be an irony here·. The reason that we *need* to be •able to form abstract ideas and universal theorems may be merely the limitation of our

minds, which can't manage an infinite multitude of singular ideas or judgments at once; and yet ·our exercise of· this •ability gives us evidence our having a ·mental· capacity that far exceeds our imagination. Thus, for instance, the 47th proposition of the first book of Euclid's *Elements* contains an infinite multitude of truths concerning the infinite possible sizes of right-angled triangles as you make the area greater or less; and for each of these sizes you can find an infinite multitude of dissimilar triangles, as you vary the proportion of the base to the perpendicular; and all the members of this infinity of infinities of results fit the general theorem. In calculations in algebra and calculus we'll find a still greater

variety of particular truths included in general theorems; not only by applying general equations to all kinds of quantity, but in more particular investigations of areas and tangents. In this branch of mathematics a single procedure will reveal theorems applicable to •infinitely many orders or species of curves, to •the infinitely many different sizes of each species, and to •the infinitely many points of the infinitely many individuals of each size.

The foundation of their beauty

(3) My thesis is that the beauty or pleasure we find when making certain mathematical discoveries is based on the agreement or unity of an infinity of objects within the general theorem. To see more clearly that this *is* what's going on, compare our •satisfaction in making such discoveries with the •uneasy state of mind we are in when we can only measure lines or surfaces using a ruler or tape-measure; or are making experiments that we can't bring under any general proposition, so that we can only heap up a multitude of particular isolated observations. Each of those trials reveals a new truth, but despite all the variety there is no pleasure or beauty until we can discover some sort of unity, or bring them under some general proposition.

There's little beauty in axioms

(4) Consider the metaphysical axiom *Every whole is greater than its part*: we don't encounter beauty when we think about it. It's true that this proposition contains many infinities of particular truths, but their unity is inconsiderable, because all they agree in is a vague, unspecific conception of whole and part, and in an indefinite excess—sometimes great and sometimes small—of the former over the latter. [In what follows, the 'inscribed sphere' of a cylinder is a sphere that is contained in the cylinder and tangentially meets each of its faces.] So when we are told that

- a cylinder is larger than its inscribed sphere, and that
- this sphere is larger than the largest cone that the cylinder contains,

we shan't get any pleasure from these unspecific bits of knowledge about larger/smaller; but when we see the universal exact agreement of all possible sizes of such systems of solids—i.e. see that *always* the cylinder is 3 times the size of the cone, and 1.5 times the size of the inscribed sphere—how beautiful that theorem is, and how bowled over we are by its first discovery! [This paragraph hasn't supported the cross-heading that introduces it, but that is not an artifact of this version. You have just seen the only two occurrences of 'axiom' in the whole work.]

Easy theorems

Easy or obvious propositions—even ones where the unity is sufficiently clear and determinate—don't please us as much as ones which, being less obvious, give us some surprise when they are discovered. Thus, we don't get much pleasure from learning that a line bisecting the vertical angle of an isosceles triangle bisects its base. . . ., or that equilateral triangles are equiangular. These truths we almost know intuitively—find them straight off to be almost self-evident—without demonstration: they are like goods that men have long possessed, which don't give such sensible joys as much smaller *new* additions may give us. But don't get the idea that the sole pleasure of theorems is from surprise, for the same novelty of a surprising single experiment doesn't please us much. Nor should we infer, from the greater pleasure accompanying a new or unexpected advantage, that surprise or novelty is the only pleasure of life or the only ground of delight in truth.

Corollaries

(5) Another beauty in propositions is what we find when one theorem contains a multitude of corollaries that are easily deducible from it. Thus, a theorem that gives us the equation of a curve, from which perhaps most of its properties can be derived, does somehow please and satisfy our mind above any other proposition. An example of such a theorem is proposition 35 of the first book of Euclid's *Elements*, from which the whole art of measuring straight-edged areas is deduced by resolving the area into triangles, which are the halves of parallelograms, each of which is equal to the rectangle with the same base and the same perpendicular altitude. Proposition 47 of the first book is another of similar beauty, and so are many others. [Euclid's 1:47 is famous in philosophical circles as the theorem that first hooked Hobbes into Euclid, making him 'in love with geometry', says his biographer Aubrey.]

In the study of nature there is a similar beauty in the knowledge of some great principles or universal forces from which countless effects flow. One example is gravitation in Newton's theory. Another is knowledge of the origin of *rights*, from which the greatest part of moral duties can be inferred in the various relations of human life, including knowledge of how a right can be transferred from one man to another. [Hutcheson mentions two classifications of rights, which will occur in the title of Section 7 of his second treatise, the one on Virtue.]

It is easy to see •how men are charmed by the beauty of such knowledge, quite apart from its usefulness; and •how this sets them to work deriving the properties of each figure from a single source, and demonstrating mechanical forces from a single theorem about the composition of motion, even after they have come to know these truths, with a high degree of certainty, through quite different demonstrations. And we take pleasure in thinking about this kind of derivation even

when we have no prospect of *getting* anything from it other than the immediate pleasure of contemplating its beauty. What about the prospect of fame? you may ask. Well, that couldn't motivate us if we weren't aware that such results please mankind immediately, through this internal sense of their beauty.

Fantastic beauty

It's equally easy see •what absurd attempts men have been led into by this sense of beauty, and •the silly pretence of obtaining it in sciences other than mathematics [meaning '... other than ones that can be treated mathematically?']. That is probably what set Descartes on that *hopeful* project of deducing all human knowledge from the single proposition *Cogito, ergo sum* [= 'I think, therefore I exist']. While others, just as foolishly, presented the proposition *Impossibile est idem simul esse & non esse* [= 'It is impossible for one thing to exist and not exist at the same time'] as having a much better claim to be 'the absolutely first principle of human knowledge' [Hutcheson gives that in Latin]. Leibniz had an equal affection for his favourite 'principle of a sufficient reason for everything in nature', and bragged to Clarke about the wonders it had helped him to achieve in the intellectual world; but his learned antagonist seems to think he didn't have *sufficient reason* for his boasting! If we look into the systems that learned men have given us in the particular sciences, we can see the drawbacks of this love of uniformity. Pufendorf tried to derive men's various duties to God, themselves, and their neighbours from his single basic principle of sociableness to the whole race of mankind—and what an awkward job he is forced to make of it! These examples (and I could easily give more) are a strong proof that men have a sense of beauty in uniformity in the sciences—even from the contortions of common sense they are led into by pursuing it.

(6) This delight that accompanies sciences [see Glossary] or universal theorems may really be called a kind of sensation: it necessarily accompanies the discovery of any proposition, and is distinct from bare knowledge itself, because it starts out as very violent and gradually becomes less so, whereas the knowledge is uniformly the same throughout time. It's true that knowledge enlarges the mind and makes us more capable of carrying out some projects that may bring advantage to us; but I leave it to you to look into yourself and find out whether you haven't often felt this pleasure without any such prospect of advantage from the discovery of your theorem. All we say about personal advantage in this topic is that with our internal senses as with our external ones the pleasant sensations generally arise from the objects that calm reason would have recommended if we had understood their use—objects that could have engaged our pursuits from self-interest.

(7) You may want to object: 'This pleasure in theorems happens only *at first*, when the discovered theorem is new and thus surprising.' Novelty is indeed generally very agreeable, and heightens our pleasure in contemplating beauty; but then the novelty of a particular truth discovered by laying a tape-measure along something (see (3) above) gives no considerable pleasure or surprise. What is pleasant and surprising, then, is the first observation of this *unity amidst such a great variety*. . . .

Products of human skill and labour

(8) As for the products of human skill and labour, if we went through all the various kinds of man-made contrivances

or structures, we would constantly find that the beauty appearing in them is some kind of uniformity or unity of proportion among the parts and of each part to the whole. There are ever so many different possible proportions, and different kinds of uniformity, so there's plenty of room for the varieties of taste and imagination that we see in the architecture, gardening, and so on in different nations; they can all have uniformity although the parts in one differ from those in another. Chinese or Persian buildings are not like Greek or Roman ones, but each of these has the uniformity of its parts to each other and to *itself* as a whole. In the kind of architecture that Europeans call 'regular', the uniformity of parts is very obvious: the several parts are regular figures, and either equal or similar. . . .; the pedestals have faces that are either square or parallelograms; the pillars are nearly cylindrical; the arches are circular, and all the arches in the same row are equal; in the same range we always find the same proportion of height to diameter of pillars, [and so on]. Other countries don't follow the Greek or Roman proportions; yet even with them a proportion is retained—a uniformity and resemblance among corresponding figures—and any deviation in one part from the proportion that is kept to in the rest of the building is displeasing to every eye, and destroys or at least reduces the beauty of the whole.

(9) The same can be observed through all other artifacts, right down to the most elementary utensil; we'll always find that the beauty of each of them has the same foundation of uniformity amidst variety, without which they appear low, irregular and ugly.

4: Relative or comparative beauty

Comparative beauty

(1) If I'm right in what I have said about the foundation of •absolute beauty, we can easily understand what •relative beauty is. All beauty is relative to some mind perceiving it; but when we use 'relative' to distinguish some cases of beauty from others, what it picks out is the beauty that is experienced in any object that is commonly regarded as an imitation of some original; and this beauty is based on a conformity—a kind of unity—between the original and the copy. The original may be either some object in nature, or some established idea—because with any known idea as a standard, and rules to fix this image or idea by, we can make a beautiful imitation of it. Thus a sculptor, painter, or poet may please us with a Hercules, if his work of art retains the grandeur and the marks of strength and courage that we imagine in that hero.

Another point: For something to have purely *comparative* beauty, there needn't be any beauty in the original. The imitation of absolute beauty may indeed make a more lovely piece; but an exact imitation will still be beautiful even if the original isn't; so the ugly features of old age in a portrait, the roughest rocks or mountains in a landscape, if well represented, will have abundant beauty, though perhaps not as much as if the original were absolutely beautiful and as well represented.

Description in poetry

(2) The same thing holds for the poets' descriptions of natural objects or of persons; and this relative beauty is what they should mainly try to achieve. By *moratae fabulae* or the [Greek word] of Aristotle, we are to understand not virtuous manners in a moral sense but a true representation

of manners or characters as they are in nature; and the requirement that in epic and dramatic poetry the actions and sentiments be appropriate for the persons to whom they are ascribed. The facts about our passions suggest some very good reasons why a poet shouldn't represent his characters as perfectly virtuous. It may be that perfectly virtuous characters, abstractly considered, would give more pleasure and have more beauty than the imperfect people that we encounter in life, with their mixture of good and evil; here are a couple of reasons why the poet shouldn't go that way. **(a)** We have livelier ideas of •imperfect men with all their passions than of •morally perfect heroes whom we never encounter in real life, so we aren't in a position to judge the accuracy of representations of the latter. **(b)** Also, because of our awareness of our own state, we are more nearly touched and affected by the imperfect characters; because in them we see represented outside ourselves the conflicts of inclinations—and the struggles between the passions of self-love and those of honour and virtue—that we often feel in our own breasts. This is the perfection of beauty for which Homer is rightly admired, as well as for the variety of his characters.

Simile and metaphor

(3) Many other beauties of poetry can be brought under this heading of 'relative beauty'. . . . It is by resemblance that similes, metaphors and allegories are made beautiful, whether or not the subject or the thing compared to it has any beauty of its own; it's true that the beauty is *greater* when both have some original beauty or dignity, and this is the basis for the rule of taking care to have decency as well as likeness in metaphors and similes. The measures

and cadences are instances of harmony, and come under the head of absolute beauty.

We are apt to compare things

(4) Our minds have a strange proneness to make perpetual comparisons among all the things that we encounter, even ones that seem very unlike. How animals move when they have certain passions are like our own movements when our passions are like that, and this is an easy basis for comparisons; but our imagination demands more! Inanimate objects often have positions that resemble those of the human body in various circumstances; these airs or gestures of our body indicate certain dispositions in the mind; so that our very passions and affections come to resemble natural inanimate objects. For example:

- a tempest at sea is an emblem of wrath;
- a plant or tree drooping under the rain is like a person in sorrow;
- a poppy bending its stalk, or a flower withering when cut by the plough, resembles the death of a hero in his flowering prime;
- an aged oak in the mountains represents an old empire,
- a flame seizing a piece of wood represents a war.

In short, our strange liking [see Glossary] for resemblance brings it about that every thing in nature comes to represent other things, even the most unlike ones, especially the passions and circumstances of human nature that most closely concern us. To confirm this and provide examples we need only to look into Homer or Virgil. A fertile imagination would find in a grove, or a wood, an emblem for every person in a country and every kind of temperament or position in life.

Intention

(5) . . . Some works of art acquire a distinct beauty by how well they fit what everyone thinks to have been the intention of the artist or the persons who commissioned the work; and sometimes to obtain *this* beauty they don't form their works so as to attain the highest perfection of original beauty separately considered; because a work with this relative beauty—along with some degree of original beauty—may give more pleasure than a more perfect original beauty separately. So we see that when gardens are laid out in parterres, vistas and parallel walks, strict regularity is often departed from so as to obtain an imitation of some of the wild aspects of nature; and we are more pleased with this imitation, especially in a very large garden, than we would be with the narrower exactness of regular works. And again, in monuments erected in honour of deceased heroes, although a cylinder or prism or regular solid may have more original beauty than a very acute pyramid or obelisk, the latter pleases us more by matching better the supposed intentions of the monument-builders, namely, that the thing be stable and conspicuous. For the same reason, cubes or square prisms are generally chosen for the pedestals of statues, rather than any of the more beautiful solids that don't seem so secure from rolling. This may also be the reason why columns or pillars look best when made to taper a little from the middle or a third of the way up, so that they won't seem top-heavy and in danger of falling.

(6) The same reason may lead artists in many other cases to depart from the rules of original beauty that I have presented; but this isn't evidence that our sense of beauty is not based—as I have said it is—on uniformity amidst variety; all it shows is that our sense of beauty of the original kind may be varied and overbalanced by another kind of beauty.

(7) This beauty arising from something's corresponding to the intentions of its maker would present to thoughtful observers a new scene of beauty in the works of nature, by considering how the mechanism of any part of nature that we know seems to be •suitable for the perfection of that part and yet •subordinate to the good of some system or whole. We generally suppose that the Author of nature intended the good of the greatest whole, i.e. of all beings; and we can't help being pleased when we see any part of this design carried out in the systems we are acquainted with. Observations that have already been made on this subject are in everyone's hand, in the books of our late improvers of mechanical philosophy. [This must be a reference to (perhaps

among others) Robert Boyle, who was a fervent supporter of mechanistic physics and a fervent Christian.] I shall only remark here that everyone has a certain pleasure in •seeing any design well carried out by an intricate mechanism, even it doesn't bring any advantage to him, and also in •discovering the design that a complex machine is adapted for, even when he already had a general knowledge of the machine before, without seeing its aptness to carry out the design in question.¹

The arguments by which we go from •the beauty of something to •reason and design in its cause are so frequently used in some of the highest subjects that we ought to look in more detail into how they work, and to see what their scope is and how conclusive they are.

¹ It is surprising to see the able author of *Alciphron*, •Dr Berkeley•, claiming that when we perceive something as beautiful we are only perceiving or imagining some *use* for it, purely on the grounds that •the concept of *intended use* constantly enters the picture when we are judging the forms of chairs, doors, tables and other things that obviously have uses, and that •we like best the forms that are fittest for their intended use. But the fact is that similarity of parts is also valued in those very things, even when dissimilar parts would be equally useful. [Hutcheson gives several examples, such as our preference for a chair to have legs that are alike in more ways than merely length. He continues:] Is no man pleased with the shapes of any animals except those he expects to be useful? . . . Is there no beauty to be seen in plants, in flowers, in animals, whose use we don't know? [The footnote concludes with an accusation that Berkeley has misunderstood something Aristotle said, treating as part of the case against the idea of *moral sense* something that is really part of the case *for* it.]

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 attack 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 other³. . . . 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 in³ and a base of area = .5 in²**. (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 supposed 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 undirected 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 n th 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 harmoniously 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 *disagreeable* 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 cloy 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;
- measuring one side gives the whole square;
- one radius, the whole circle;
- two diameters, an oval;
- 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 so 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'.

* * * * *

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.