

Book II

§ 1 · Let the foregoing suffice as our account of the views concerning the soul which have been handed on by our predecessors; let us now make as it were a completely fresh start, endeavouring to answer the question, What is soul? i.e. to formulate the most general possible account of it.

412a1-412a5

We say that substance is one kind of what is, and that in several senses: in the sense of matter or that which in itself is not a this, and in the sense of form or essence, which is that precisely in virtue of which a thing is called a this, and thirdly in the sense of that which is compounded of both. Now matter is potentiality, form actuality; and actuality is of two kinds, one as e.g. knowledge, the other as e.g. reflecting.

412a6-412a11

Among substances are by general consent reckoned bodies and especially natural bodies; for they are the principles of all other bodies. Of natural bodies some have life in them, others not; by life we mean self-nutrition and growth and decay. It follows that every natural body which has life in it is a substance in the sense of a composite.

412a12-412a17

Now given that there are bodies of such and such a kind, viz. having life, the soul cannot be a body; for the body is the subject or matter, not what is attributed to it. Hence the soul must be a substance in the sense of the form of a natural body having life potentially within it. But substance is actuality, and thus soul is the actuality of a body as above characterized. Now there are two kinds of actuality corresponding to knowledge and to reflecting. It is obvious that the soul is an actuality like knowledge; for both sleeping and waking presuppose the existence of soul, and of these waking corresponds to reflecting, sleeping to knowledge possessed but not employed, and knowledge of something is temporally prior.

412a18-412a26

That is why the soul is an actuality of the first kind of a natural body having life potentially in it. The body so described is a body which is organized. The parts of plants in spite of their extreme simplicity are organs; e.g. the leaf serves to shelter the pericarp, the pericarp to shelter the fruit, while the roots of plants are analogous to the mouth of animals, both serving for the absorption of food. If, then, we have to give a general formula applicable to all kinds of soul, we must describe it as an actuality of the first kind of a natural organized body. That is why we can dismiss as unnecessary the question whether the soul and the body

412a27-412b9

are one: it is as though we were to ask whether the wax and its shape are one, or generally the matter of a thing and that of which it is the matter. Unity has many senses (as many as 'is' has), but the proper one is that of actuality.

412b10-412b24

We have now given a general answer to the question, What is soul? It is substance in the sense which corresponds to the account of a thing. That means that it is what it is to be for a body of the character just assigned. Suppose that a tool, e.g. an axe, were a *natural* body, then being an axe would have been its essence, and so its soul; if this disappeared from it, it would have ceased to be an axe, except in name. As it is, it is an axe; for it is not of a body of that sort that what it is to be, i.e. its account, is a soul, but of a natural body of a particular kind, viz. one having in itself the power of setting itself in movement and arresting itself. Next, apply this doctrine in the case of the parts of the living body. Suppose that the eye were an animal—sight would have been its soul, for sight is the substance of the eye which corresponds to the account, the eye being merely the matter of seeing; when seeing is removed the eye is no longer an eye, except in name—no more than the eye of a statue or of a painted figure. We must now extend our consideration from the parts to the whole living body; for what the part is to the part, that the whole faculty of sense is to the whole sensitive body as such.

412b25-413a3

We must not understand by that which is potentially capable of living what has lost the soul it had, but only what still retains it; but seeds and fruits are bodies which are potentially of that sort. Consequently, while waking is actuality in a sense corresponding to the cutting and the seeing, the soul is actuality in the sense corresponding to sight and the power in the tool; the body corresponds to what is in potentiality; as the pupil *plus* the power of sight constitutes the eye, so the soul *plus* the body constitutes the animal.

413a4-413a9

From this it is clear that the soul is inseparable from its body, or at any rate that certain parts of it are (if it has parts)—for the actuality of some of them is the actuality of the parts themselves. Yet some may be separable because they are not the actualities of any body at all. Further, we have no light on the problem whether the soul may not be the actuality of its body in the sense in which the sailor is the actuality of the ship.¹³

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This must suffice as our sketch or outline of the nature of soul.

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§ 2 · Since what is clear and more familiar in account emerges from what in itself is confused but more observable by us, we must reconsider our results from this point of view. For it is not enough for a definitional account to express as

¹³Omitting *e* with the MSS.

most now do the mere fact; it must include and exhibit the cause also. At present definitions are given in a form analogous to the conclusion of an argument; e.g. What is squaring? The construction of an equilateral rectangle equal to a given oblong rectangle. Such a definition is in form equivalent to a conclusion. One that tells us that squaring is the discovery of a mean proportional discloses the cause of what is defined.

We resume our inquiry from a fresh starting-point by calling attention to the fact that what has soul in it differs from what has not in that the former displays life. Now this word has more than one sense, and provided any one alone of these is found in a thing we say that thing is living—viz. thinking or perception or local movement and rest, or movement in the sense of nutrition, decay and growth. Hence we think of plants also as living, for they are observed to possess in themselves an originaive power through which they increase or decrease in all spatial directions; they do not grow up but not down—they grow alike in both, indeed in all, directions; and that holds for everything which is constantly nourished and continues to live, so long as it can absorb nutriment.

413a21-413a31

This power of self-nutrition can be separated from the other powers mentioned, but not they from it—in mortal beings at least. The fact is obvious in plants; for it is the only psychic power they possess.

413a32-413a34

This is the originaive power the possession of which leads us to speak of things as *living* at all, but it is the possession of sensation that leads us for the first time to speak of living things as *animals*; for even those beings which possess no power of local movement but do possess the power of sensation we call animals and not merely living things.

413b1-413b3

The primary form of sense is touch, which belongs to all animals. Just as the power of self-nutrition can be separated from touch and sensation generally, so touch can be separated from all other forms of sense. (By the power of self-nutrition we mean that part of the soul which is common to plants and animals: all animals whatsoever are observed to have the sense of touch.) What the explanation of these two facts is, we must discuss later. At present we must confine ourselves to saying that soul is the source of these phenomena and is characterized by them, viz. by the powers of self-nutrition, sensation, thinking, and movement.

413b4-413b13

Is each of these a soul or a part of a soul? And if a part, a part merely distinguishable by definition or a part distinct in local situation as well? In the case of certain of these powers, the answers to these questions are easy, in the case of others we are puzzled what to say. Just as in the case of plants which when divided are observed to continue to live though separated from one another (thus showing that in *their* case the soul of each individual plant was actually one, potentially many),

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so we notice a similar result in other varieties of soul, i.e. in insects which have been cut in two; each of the segments possesses both sensation and local movement; and if sensation, necessarily also imagination and appetition; for, where there is sensation, there is also pleasure and pain, and, where these, necessarily also desire.

413b25-414a3

We have no evidence as yet about thought or the power of reflexion; it seems to be a different kind of soul, differing as what is eternal from what is perishable; it alone is capable of being separated. All the other parts of soul, it is evident from what we have said, are, in spite of certain statements to the contrary, incapable of separate existence though, of course, distinguishable by definition. If opining is distinct from perceiving, to be capable of opining and to be capable of perceiving must be distinct, and so with all the other forms of living above enumerated. Further, some animals possess all these parts of soul, some certain of them only, others one only (this is what enables us to classify animals); the cause must be considered later. A similar arrangement is found also within the field of the senses; some classes of animals have all the senses, some only certain of them, others only one, the most indispensable, touch.

414a4-414a28

Since the expression ‘that whereby we live and perceive’ has two meanings, just like the expression ‘that whereby we know’—that may mean either knowledge or the soul, for we can speak of knowing *by* either, and similarly that whereby we are in health may be either health or the body or some part of the body; and since of these knowledge or health is a form, essence, or account, or if we so express it an activity of a recipient matter—knowledge of what is capable of knowing, health of what is capable of being made healthy (for the activity of that which is capable of originating change seems to take place in what is changed or altered); further, since it is the soul by which primarily we live, perceive, and think:—it follows that the soul must be an account and essence, not matter or a subject. For, as we said, the word substance has three meanings—form, matter, and the complex of both—and of these matter is potentiality, form actuality. Since then the complex here is the living thing, the body cannot be the actuality of the soul; it is the soul which is the actuality of a certain kind of body. Hence the rightness of the view that the soul cannot be without a body, while it cannot *be* a body; it is not a body but something relative to a body. That is why it is *in* a body, and a body of a definite kind. It was a mistake, therefore, to do as former thinkers did, merely to fit it into a body without adding a definite specification of the kind or character of that body, although evidently one chance thing will not receive another. It comes about as reason requires: the actuality of any given thing can only be realized in what is already potentially that thing, i.e. in a matter of its own appropriate to

it. From all this it is plain that soul is an actuality or account of something that possesses a potentiality of being such.

§ 3 · Of the psychic powers above enumerated some kinds of living things, as we have said, possess all, some less than all, others one only. Those we have mentioned are the nutritive, the appetitive, the sensory, the locomotive, and the power of thinking. Plants have none but the first, the nutritive, while another order of living things has this *plus* the sensory. If any order of living things has the sensory, it must also have the appetitive; for appetite is the genus of which desire, passion, and wish are the species; now all animals have one sense at least, viz. touch, and whatever has a sense has the capacity for pleasure and pain and therefore has pleasant and painful objects present to it, and wherever these are present, there is desire, for desire is appetition of what is pleasant. Further, all animals have the sense for food (for touch is the sense for food; the food of all living things consists of what is dry, moist, hot, cold, and these are the qualities apprehended by touch) all other sensible qualities are apprehended by touch only indirectly. Sounds, colours, and odours contribute nothing to nutriment; flavours fall within the field of tangible qualities. Hunger and thirst are forms of desire, hunger a desire for what is dry and hot, thirst a desire for what is cold and moist; flavour is a sort of seasoning added to both. We must later clear up these points, but at present it may be enough to say that all animals that possess the sense of touch have also appetition. The case of imagination is obscure; we must examine it later. Certain kinds of animals possess in addition the power of locomotion, and still others, i.e. man and possibly another order like man or superior to him, the power of thinking and thought. It is now evident that a single definition can be given of soul only in the same sense as one can be given of figure. For, as in that case there is no figure apart from triangle and those that follow in order, so here there is no soul apart from the forms of soul just enumerated. It is true that a common definition can be given for figure which will fit all figures without expressing the peculiar nature of any figure. So here in the case of soul and its specific forms. Hence it is absurd in this and similar cases to look for a common definition which will not express the peculiar nature of anything that is and will not apply to the appropriate indivisible species, while at the same time omitting to look for an account which will. The cases of figure and soul are exactly parallel; for the particulars subsumed under the common name in both cases—figures and living beings—constitute a series, each successive term of which potentially contains its predecessor, e.g. the square the triangle, the sensory power the self-nutritive. Hence we must ask in the case of each order of living things, What is

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its soul, i.e. What is the soul of plant, man, beast? Why the terms are related in this serial way must form the subject of examination. For the power of perception is never found apart from the power of self-nutrition, while—in plants—the latter is found isolated from the former. Again, no sense is found apart from that of touch, while touch *is* found by itself; many animals have neither sight, hearing, nor smell. Again, among living things that possess sense some have the power of locomotion, some not. Lastly, certain living beings—a small minority—possess calculation and thought, for (among mortal beings) those which possess calculation have all the other powers above mentioned, while the converse does not hold—indeed some live by imagination alone, while others have not even imagination. Reflective thought presents a different problem.

415a13-415a13 It is evident that the way to give the most adequate definition of soul is to seek in the case of *each* of its forms for the most appropriate definition.

415a14-415a22 § 4 · It is necessary for the student of these forms of soul first to find a definition of each, expressive of what it is, and then to investigate its derivative properties, &c. But if we are to express what each is, viz. what the thinking power is, or the perceptive, or the nutritive, we must go farther back and first give an account of thinking or perceiving; for activities and actions are prior in definition to potentialities. If so, and if, still prior to them, we should have reflected on their correlative objects, then for the same reason we must first determine about them, i.e. about food and the objects of perception and thought.

415a23-415b8 It follows that first of all we must treat of nutrition and reproduction, for the nutritive soul is found along with all the others and is the most primitive and widely distributed power of soul, being indeed that one in virtue of which all are said to have life. The acts in which it manifests itself are reproduction and the use of food, because for any living thing that has reached its normal development and which is unmutated, and whose mode of generation is not spontaneous, the most natural act is the production of another like itself, an animal producing an animal, a plant a plant, in order that, as far as its nature allows, it may partake in the eternal and divine. That is the goal towards which all things strive, that for the sake of which they do whatsoever their nature renders possible. The phrase ‘for the sake of which’ is ambiguous; it may mean either the end to achieve which, or the being in whose interest, the act is done. Since then no living thing is able to partake in what is eternal and divine by uninterrupted continuance (for nothing perishable can for ever remain one and the same), it tries to achieve that end in the only way possible to it, and success is possible in varying degrees; so it remains not indeed as the self-same individual but continues its existence in something

like itself—not numerically but specifically one.

The soul is the cause or source of the living body. The terms cause and source have many senses. But the soul is the cause of its body alike in all three senses which we explicitly recognize. It is the source of movement, it is the end, it is the essence of the whole living body.

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That it is the last, is clear; for in everything the essence is identical with the cause of its being, and here, in the case of living things, their being is to live, and of their being and their living the soul in them is the cause or source. Further, the actuality of whatever is potential is identical with its account.

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It is manifest that the soul is also the final cause. For nature, like thought, always does whatever it does for the sake of something, which something is its end. To that something corresponds in the case of animals the soul and in this it follows the order of nature; all natural bodies are organs of the soul. This is true of those that enter into the constitution of plants as well as of those which enter into that of animals. This shows that that for the sake of which they are is soul. That for the sake of which has two senses, viz. the end to achieve which, and the being in whose interest, anything is or is done.

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The soul is also the cause of the living body as the original source of local movement. The power of locomotion is not found, however, in all living things. But change of quality and change of quantity are also due to the soul. Sensation is held to be a qualitative alteration, and nothing except what has soul in it is capable of sensation. The same holds of growth and decay; nothing grows or decays naturally except what feeds itself, and nothing feeds itself except what has a share of life in it.

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Empedocles is wrong in adding that growth in plants is to be explained, the downward rooting by the natural tendency of earth to travel downwards, and the upward branching by the similar natural tendency of fire to travel upwards. For he misinterprets up and down; up and down are not for all things what they are for the whole world: if we are to distinguish and identify organs according to their functions, the roots of plants are analogous to the head in animals. Further, we must ask what is the force that holds together the earth and the fire which tend to travel in contrary directions; if there is no counteracting force, they will be torn asunder; if there is, this must be the soul and the cause of nutrition and growth. By some the element of fire is held to be the cause of nutrition and growth, for it alone of the bodies or¹⁴ elements is observed to feed and increase itself. Hence the suggestion that in both plants and animals it is it which is the operative force. A

415b28-416a18

¹⁴Ross excises 'bodies or'.

concurrent cause in a sense it certainly is, but not the principal cause; that is rather the soul; for while the growth of fire goes on without limit so long as there is a supply of fuel, in the case of all complex wholes formed in the course of nature there is a limit or ratio which determines their size and increase, and limit and ratio are marks of soul but not of fire, and belong to the side of account rather than that of matter.

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Nutrition and reproduction are due to one and the same psychic power. It is necessary first to give precision to our treatment of food, for it is by this function of absorbing food that this psychic power is distinguished from all the others. The current view is that what serves as food to a living thing is what is contrary to it—not that in every pair of contraries each is food to the other: to be food a contrary must not only be transformable into the other and vice versa, it must also in so doing increase the bulk of the other. Many a contrary is transformed into its other and vice versa, where neither is even a quantum e.g. an invalid into a healthy subject. It is clear that not even those contraries are food to one another in precisely the same sense; water may be said to feed fire, but not fire water. Where the members of the pair are elementary bodies only one of the contraries, it would appear, can be said to feed the other. But there is a difficulty here. One set of thinkers assert that like is fed, as well as increased in amount, by like. Another set, as we have said, maintain the very reverse, viz. that what feeds and what is fed are contrary to one another; like, they argue, is incapable of being affected by like; but food is changed in the process of digestion, and change is always *to* what is opposite or to what is intermediate. Further, food is acted upon by what is nourished by it, not the other way around, as timber is worked by a carpenter and not conversely; there is a change in the carpenter but it is merely a change from not-working to working. In answering this problem it makes all the difference whether we mean by ‘the food’ the ‘finished’ or the ‘raw’ product. If we use the word food of both, viz. of the undigested and the digested matter, we can justify both the rival accounts of it; taking food in the sense of undigested matter, it is the contrary of what is fed by it, taking it as digested it is like what is fed by it. Consequently it is clear that in a certain sense we may say that both parties are right, both wrong.

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Since nothing except what is alive can be fed, what is fed is the besouled body and just because it has soul in it. Hence food is essentially related to what has soul in it. Food has a power which is other than the power to increase the bulk of what is fed by it; so far forth as what has soul in it is a quantum, food may increase its quantity, but it is only so far as what has soul in it is a ‘this-somewhat’ or substance that food acts *as* food; in that case it maintains the being of what is fed, and that

continues to be what it is so long as the process of nutrition continues. Further, it is the agent in generation, i.e. not the generation of the individual fed but the reproduction of another like it; the substance of the individual fed is already in existence; nothing generates itself, but only maintains itself.

Hence the psychic power which we are now studying may be described as that which tends to maintain whatever has this power in it of continuing such as it was, and food helps it to do its work. That is why, if deprived of food, it must cease to be.

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The process of nutrition involves three factors, what is fed, that wherewith it is fed, and what does the feeding; of these what feeds is the first soul, what is fed is the body which has that soul in it, and that with which it is fed is the food. But since it is right to call things after the ends they realize, and the end of this soul is to generate another being like that in which it is, the first soul ought to be named the reproductive soul. The expression 'wherewith it is fed' is ambiguous just as is the expression 'wherewith the ship is steered'; that may mean either the hand or the rudder, i.e. either what is moved and sets in movement, or what is merely moved. All food must be capable of being digested, and what produces digestion is warmth; that is why everything that has soul in it possesses warmth.

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We have now given an outline account of the nature of food; further details must be given in the appropriate place.

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§ 5 · Having made these distinctions let us now speak of sensation in the widest sense. Sensation depends, as we have said, on a process of movement or affection from without, for it is held to be some sort of change of quality. Now some thinkers assert that like is affected only by like; in what sense this is possible and in what sense impossible, we have explained in our general discussion of acting and being acted upon.¹⁵

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Here arises a problem: why do we not perceive the senses themselves, or why without the stimulation of external objects do they not produce sensation, seeing that they contain in themselves fire, earth, and all the other elements, of which—either in themselves or in respect of their incidental attributes—there is perception? It is clear that what is sensitive is so only potentially, not actually. The power of sense is parallel to what is combustible, for that never ignites itself spontaneously, but requires an agent which has the power of starting ignition; otherwise it could have set itself on fire, and would not have needed actual fire to set it ablaze.

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We use the word 'perceive' in two ways, for we say that what has the power

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¹⁵See *Gen Corr* I 7.

to hear or see, ‘sees’ or ‘hears’, even though it is at the moment asleep, and also that what is actually seeing or hearing, ‘sees’ or ‘hears’. Hence ‘sense’ too must have two meanings, sense potential, and sense actual. Similarly ‘to be a sentient’ means either to have a certain power or to manifest a certain activity. To begin with let us speak as if there were no difference between being moved or affected, and being active, for movement is a kind of activity—an imperfect kind, as has elsewhere been explained. Everything that is acted upon or moved is acted upon by an agent which is actually at work. Hence it is that in one sense, as has already been stated, what acts and what is acted upon are like, in another unlike; for the unlike is affected, and when it has been affected it is like.

417a22-417b1

But we must now distinguish different senses in which things can be said to be potential or actual; at the moment we are speaking¹⁶ as if each of these phrases had only one sense. We can speak of something as a knower either as when we say that man is a knower, meaning that man falls within the class of beings that know or have knowledge, or as when we are speaking of a man who possesses a knowledge of grammar; each of these has a potentiality, but not in the same way: the one because his kind or matter is such and such, the other because he can reflect when he wants to, if nothing external prevents him. And there is the man who is already reflecting—he is a knower in actuality and in the most proper sense is knowing, e.g. this A. Both the former are potential knowers, who realize their respective potentialities, the one by change of quality, i.e. repeated transitions from one state to its opposite under instruction, the other in another way by the transition from the inactive possession of sense¹⁷ or grammar to their active exercise.

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Also the expression ‘to be acted upon’ has more than one meaning; it may mean either the extinction of one of two contraries by the other, or the maintenance of what is potential by the agency of what is actual and already like what is acted upon, as actual to potential. For what possesses knowledge becomes an actual knower by a transition which is either not an alteration of it at all (being in reality a development into its true self or actuality) or at least an alteration in a quite different sense.

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Hence it is wrong to speak of a wise man as being ‘altered’ when he uses his wisdom, just as it would be absurd to speak of a builder as being altered when he is using his skill in building a house.

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What in the case of thinking or understanding leads from potentiality to actuality ought not to be called teaching but something else. That which starting with

¹⁶Retaining *legomen*.

¹⁷Retaining *aisthesin*: Ross prints *arithmetiken*, ‘arithmetic’.

the power to know learns or acquires knowledge through the agency of one who actually knows and has the power of teaching either ought not to be said ‘to be acted upon’ at all—or else we must recognize two senses of alteration, viz. the change to conditions of privation, and the change to a thing’s dispositions and to its nature.

In the case of what is to possess sense, the first transition is due to the action of the male parent and takes place before birth so that at birth the living thing is, in respect of sensation, at the stage which corresponds to the possession of knowledge. Actual sensation corresponds to the stage of the exercise of knowledge. But between the two cases compared there is a difference; the objects that excite the sensory powers to activity, the seen, the heard, &c., are outside. The ground of this difference is that what actual sensation apprehends is individuals, while what knowledge apprehends is universals, and these are in a sense within the soul itself. That is why a man can think when he wants to but his sensation does not depend upon himself—a sensible object must be there. A similar statement must be made about our knowledge of what is sensible—on the same ground, viz. that the sensible objects are individual and external.

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A later more appropriate occasion may be found thoroughly to clear up all this. At present it must be enough to recognize the distinctions already drawn; a thing may be said to be potential in either of two senses, either in the sense in which we might say of a boy that he may become a general or in the sense in which we might say the same of an adult, and there are two corresponding senses of the term ‘a potential sentient’. There are no separate names for the two stages of potentiality; we have pointed out that they are different and how they are different. We cannot help using the incorrect terms ‘being acted upon or altered’ of the two transitions involved. As we have said, what has the power of sensation is potentially like what the perceived object is actually; that is, while at the beginning of the process of its being acted upon the two interacting factors are dissimilar, at the end the one acted upon is assimilated to the other and is identical in quality with it.

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§ 6 · In dealing with each of the senses we shall have first to speak of the objects which are perceptible by each. The term ‘object of sense’ covers three kinds of objects, two kinds of which we call perceptible in themselves, while the remaining one is only incidentally perceptible. Of the first two kinds one consists of what is special to a single sense, the other of what is common to any and all of the senses. I call by the name of special object of this or that sense that which cannot be perceived by any other sense than that one and in respect of which no error is possible; in this sense colour is the special object of sight, sound

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