

# Selected Correspondence of Descartes

René Descartes

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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 has no philosophical interest, or that seems to present more difficulty than it is worth. (Where a letter opens with civilities and/or remarks about the postal system, the omission of this material is not marked by ellipses.) Longer omissions are reported between brackets in normal-sized type. —The letters between Descartes and Princess Elisabeth of Bohemia, omitted here, are presented elsewhere on this website (but see note on page 181).—This version is greatly indebted to CSMK [see Glossary] both for a good English translation to work from and for many explanatory notes, though most come from AT [see Glossary].—Descartes usually refers to others by title ('M.' for 'Monsieur' or 'Abbé' or 'Reverend Father' etc.); the present version omits most of these.—Although the material is selected mainly for its bearing on Descartes as a *philosopher*, glimpses are given of the colour and flavour of other sides of his life.

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## Glossary

**accident:** Often used to mean ‘non-essential property’: your being more than 5’ tall is an accident of you, whereas some philosophers would say that your having the power of thought is not. But quite often ‘accident’ is used just to mean ‘property or quality’, with no special emphasis on non-essentialness.

**a priori, a posteriori:** In Descartes’s day these phrases were used 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. between •causally arguing forward and •causally arguing backwards; quite unlike Kant’s use of the terms to mean •‘independently of experience’ and •‘on the basis of experience’.

**animal spirits:** This stuff was supposed to be even more finely divided than air, able to move extremely fast and seep into tiny crevices. Descartes describes their formation on page 163.—Apparently some people thought of spirits as so rarefied as to be almost mind-like(!), and thus suitable to mediate between mind and body; but Descartes is innocent of this absurdity. Its most famous occurrence is in Donne’s superb lines: ‘As our blood labours to beget / Spirits as like souls as it can, / Because such fingers need to knit / The subtle knot that makes us man. . .’.

**art:** Any human activity that involves techniques or rules of procedure.

**AT:** This refers either to *Œuvres de Descartes*, edited by Charles Adam and Paul Tannery, or to Adam and Tannery themselves.

**beg the question:** Until fairly recently, to ‘beg the question’ was to offer a ‘proof’ of P from premises that include P. It now means ‘raise the question’. It seems that complacently illiterate journalists (of whom there are many) encountered the phrase, liked it, guessed at its meaning, and saw no reason to check on the guess.

**burning mirror:** A concave mirror which can reflect the sun’s ray to a point, creating enough heat there to start a fire.

**catoptrics:** The part of optics that deals with reflections.

**chimera:** A chimera can be a fabulous beast or monster, or a thought or idea of image of something fantastic, fabulous, etc. In Descartes’s usage it is always the second meaning that is at work.

**circular:** Descartes holds that all motion is in a closed loop (despite his always calling it ‘circular’, he has no views about its shape). His reason for the loop thesis is this: Absolutely all space is full of extended substance(s), there are no gaps; and no material substance can shrink, or expand, or spatially overlap another material substance. Therefore, if body  $b_1$  is to move from location  $L_1$ , it must shove aside body  $b_2$ , which must shove aside  $b_3$ . . . and so on; so if an infinite chain of movements is to be avoided, somewhere along the way there must be body  $b_n$  which is pushed into location  $L_1$ , thus closing the loop. (It has to be instantaneous:  $L_1$  mustn’t be empty for a split second between the departure of  $b_1$  and the arrival of  $b_n$ .)

**common notion:** In Descartes’s usage, a ‘common notion’ is a really basic elementary logical truth.

**common sense:** The phrase ‘*the common sense*’ was the name of a supposed faculty or organ or brain-region where inputs from the various senses are processed together and united.

**concurrence:** God’s concurrence in an event is his going along with it, in some (supposed) sense that is weaker than •his outright causing it but stronger than •his merely not preventing it.

**CSMK:** This is volume 3 of *The Philosophical Works of Descartes*, translated by John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny.

**doctor:** Learned man.

**efficient cause:** This is an Aristotelian technical term. The •formal cause of a coin is its design, the plan according to which it was made; its •material cause is the stuff it is made of; its •final cause is its purpose, namely to be used in commerce; and its •**efficient cause** is the action of the die in stamping the coin out of a metal sheet. So the efficient cause is what you and I would call, simply, ‘the cause’.

**eminently, formally:** These are scholastic technical terms that Descartes adopts for his own purposes. To say that something has (say) intelligence ‘formally’ is just to say that it is intelligent; to say that it has intelligence ‘eminently’ is to say that it has intelligence in some higher form that doesn’t involve its being straightforwardly intelligent. The distinction comes into play through the doctrine that whatever is present in an effect is also present in its cause. Obviously something can be caused to be rigid by a cause that isn’t itself rigid; and God presumably doesn’t straightforwardly have many of the qualities he causes other things to have—he isn’t square or muddy or (for that matter) given to telling bad jokes. So the doctrine takes the form ‘Whatever is present in an effect is

also present *formally or eminently* in its cause. Descartes’s only explanation of this terminology is to say that ‘x has Fness eminently’ means ‘x has the power to cause things to have Fness’, which you’ll notice turns the doctrine into a triviality.

**de volenté:** Descartes repeatedly associates rationally loving x with joining oneself *de volenté* with x. This doesn’t mean joining oneself voluntarily, by volition [*volenté*]; it is a technical term, which he explains on page 191 where he equates ‘x joins itself to y *de volenté*’ with ‘x considers itself and y as forming two parts of a single whole’. A bit less abruptly, you join yourself *de volenté* with the person you love if you *will yourself into a state in which you feel as though* you and that person are the two parts of a single whole.

**ens per accidens, per se:** A pyramid is a collection of stone blocks that constitute an *ens per accidens* = an entity by happenstance. It just happens to be the case that they are inter-related in a way that makes them a pyramid, a thing, an *ens*. They don’t have any features that intrinsically draw them together, somehow making them *belong* together as a single entity; that would be an *ens per se*.

**heaven:** Sometimes Descartes uses ‘the heavens’, as we still sometimes do, to mean ‘the whole visible universe outside the earth’. But in the *Principles of Philosophy* and some of his letters ‘heaven’ occurs as a technical term referring to any large spherical mass of rotating fluid material with a star or planet at its centre. The earth, he says, ‘is completely immersed in a very fluid heaven’.

**indifferent:** A situation where your will is ‘indifferent’ with respect to your doing A is a situation where you are under no external pressure to do A and none to refrain from doing A. For finer tuning, see page 175.

**ineffable:** Too great to be fully described in words. (The antonym ‘effable’ occurs these days only in jokes.)

**inform:** When Descartes says that your body is ‘informed’ by your soul, he means only that your body *has* that soul, is united with it in the standard body-soul manner. It’s odd that he uses this verb in this way: it echoes the Aristotelian doctrine that your soul is *the form of your body*; and that doctrine, whatever it means, is denied by Descartes’s thesis that your body is one substance and your soul is another.

**interpenetration of dimensions:** Descartes holds that it impossible for two distinct •portions of matter to overlap spatially: for any two such items, the volume of them both is the sum of the volumes of each separately. For him this is equivalent to saying that two distinct •regions of space can’t overlap; and he expresses by saying that he rejects the ‘interpenetration of dimensions’.

**metempsychosis:** The movement of a soul from one body to another.

**mœurs:** A person’s *mœurs* includes his morality, his basic habits, his attitudes and expectations about how people will behave, his ideas about what is decent. . . and so on. This word—rhyming approximately with ‘worse’—is left untranslated because there’s no good English equivalent to it.

**moral certainty:** A degree of certainty that is high enough for practical purposes, high enough to make practical doubt unreasonable; similarly with **morally impossible**. (In this phrase ‘moral’ is used in its old sense of ‘having to do with human behaviour’.)

**natural light:** If you know something to be true just by thinking hard about it in the right way, Descartes will say that you know it ‘by the natural light’.

**numerical identity:** To say that *x* is numerically identical with *y* means simply that *x* is *y*, which is equivalent to saying that *x* and *y* are *one*—that’s how ‘numerical(ly)’ comes into it. Why have any adjective or adverb in these contexts? Because the writer thinks that the reader might take the unvarnished ‘identity’ to refer to some kind of mere similarity.

**objective:** When Descartes speaks of the ‘objective being’ of an idea he is referring to its representative content, the being that is its object, the item that it is about.

**parhelia:** Two bright patches flanking the sun, sometimes called ‘false suns’.

**passion:** When Descartes speaks of ‘passions’ that people and other animals have, he using the word in about the same sense as we do. Outside the animal context the word is the antonym of ‘action’: action/passion = doing/undergoing.

**Pelagian:** Follower of Pelagius, a 4th-century theologian whose stress on the role of human effort as a means to salvation was thought by many to push divine grace out of the picture.

**pineal gland:** This is the current name for the gland that Descartes always refers to as ‘the gland called “the conarium”’.

**prejudice:** This translates the French *préjugé* and the Latin *præjudicium*. These basically mean ‘something judged or believed in advance’ (of the present investigation, of the evidence, or of etc.). These days ‘prejudice’ usually has the narrower meaning of ‘something pre-judged concerning race, sex, etc.’. To avoid that taint, CSMK uses ‘preconceived opinion’ (7 syllables); the present text will use ‘prejudice’ (3 syllables) accompanied by this warning.

**princess:** When Descartes speaks of *Queen* Christina as a princess he is following a usage that used to be fairly common for 'prince' (and its cognates in French and Latin), namely as standing for any ruler of a state, whether a king or queen or duke or count etc.

**principle:** In Descartes's writings a *principe* (French) or *principium* (Latin) is often a certain kind of universal proposition—e.g. in the title standardly translated as *Principles of Philosophy*. But he sometimes uses one of these words in a sense, once common but now obsolete, in which it means 'source', 'cause', 'driver', 'energiser', or the like (see pages 23 and 215). The English 'principle' also had that sense; Hume's *Enquiry Concerning the Principles of Morals* is, he tells us, an enquiry into the *sources in human nature* of our moral thinking and feeling.

**privation:** A privation in x is x's not having something that it ought to have. If a person can't speak, that is a privation in him; a rock's lack of the ability to speak is not a privation in it but a mere **negation**.

**rarefied:** In early modern times, 'rare' and the French *rare* meant the opposite of 'dense', and was usually understood to mean 'very finely divided'.

**real quality, real accident:** These phrases use 'real' in its old sense of 'thing-like' (from Latin *res* = 'thing'). The core thought is this: if heat, for example, is a 'real quality' or 'real accident', then any instance of heat can be thought of independently of anything's *having* it. When a thing x comes to be hot, what happens is that it comes to *have* a real quality, a particular instance of heat. Descartes rejects this, and holds that predicative propositions should be thought of as having the form 'x is-hot' rather than 'x relates-by-possession-to hotness'. When on page 158

Descartes says that he doesn't credit *motion* with any more reality than is generally attributed to *shape*, he means that philosophers generally wouldn't speak of a ball's being round as a result of a thing-like instance of roundness that the ball possesses; and he says that the same goes for the ball's being in motion.

**reflection, refraction:** How light bounces off a mirror, how light *tilts* as it enters a translucent medium. The problem with refraction was to get a sound general account of how the angle at which the light meets the surface of the translucent body [incidence] relates to the angle at which it carries on from there [refraction]. This could involve light going from air into glass or from glass into air; this problem was central to the making of optical lenses,

**reminiscence:** Plato's doctrine that things you know without having learned them from experience or from other people are things you *remember* from a previous life when the soul you now have was joined to a different body.

**School:** The 'Schools' were philosophy departments that were almost entirely under Aristotle's influence, as mediated by Roman Catholic philosophers and theologians.

**science:** In early modern times the English word 'science', the French *science* and the Latin *scientia* applied to any body of knowledge or theory that is (perhaps) axiomatised and (certainly) well founded and conceptually highly organised.

**sensible:** Translating French *sensible* and Latin *sensibilis*, this usually means 'capable of being sensed', i.e. '... of being perceived through the senses'. But on page 217 and perhaps elsewhere, Descartes uses 'sensible quality' to refer to what are commonly called the 'secondary qualities' such as colour, smell, sound, etc. and *not* including shape and size, though these are perceptible by the senses.

**soul:** This translates *âme*. It doesn't obviously mean anything different from *esprit* = 'mind', and has no theological implications.

**species:** When on page 103 Descartes speaks of 'the species that enter the eyes' etc. he is using the language of a theory of Aristotle's that he doesn't actually believe. According to this theory, when you see a kitten a tiny *representation of a kitten* enters your eyes, and this **representative something-or-other** is called a 'sensible species'. All Descartes needs from this on page 103—and presumably all he intends—is to speak of eyesight as involving a **something-or-other** entering your eyes.

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

**substantial form:** When Descartes first **uses** this term here, on page 25, it is not clear what he means by it. In many other places—e.g. on pages 75 and 136—he merely **mentions** it as an item in false Aristotelian metaphysics. In his letter to Regius on January 1642—starting on page 148—he says that he isn't denying that there are substantial forms but merely saying that he can do (meta)physics without them.

**subtle:** When Descartes speaks of some matter as 'subtle', he means that it is *extremely* finely divided, more fluid than water; and he usually thinks of the ultra-tiny particles composing it as moving very fast.

**transubstantiation:** The doctrine that in the Eucharist the bread comes to be part of the *substance* of Christ's body although it still has the *qualities* of mere bread.

**violent:** Aristotle divided motions into 'natural' and 'violent': the movement to the ground of a dropped pebble is natural, its upward movement when you throw it up is 'violent'.

Thus when on page 57 Descartes rejects the natural/violent distinction, he is rejecting Mersenne's apparent assumption that some states of water are natural and others are not (though he would hardly say that the others are 'violent').

**vidid:** This belongs to the pair  
'vivid' and 'clear',

which translates the Latin  
*clarus* and *distinctus*

and the French

*clair* and *distinct*.

Every other English translator has put

'clear' and 'distinct'

but this is certainly wrong. The crucial point concerns *clarus* (and the French *clair*). The word can mean 'clear' in our sense, and when Descartes uses it **outside** the *clarus et distinctus* phrase, it seems usually to be in that sense. But **in** that phrase he uses *clarus* in its other meaning—its more common meaning in Latin—of 'bright' or 'vivid', as in *clara lux* = 'broad daylight'. If in the phrase *clarus et distinctus* Descartes meant *clarus* in its meaning of 'clear', then what's left for 'distinctus' to mean? Descartes's only explanation of these terms is in *Principles of Philosophy* 1:45–6, a passage that completely condemns the usual translation. He writes: 'I call a perception *claram* when it is present and accessible to the attentive mind—just as we say that we see something *clare* when it is present to the eye's gaze and stimulates it with enough strength and accessibility. I call a perception *distinctam* if, as well as being *clara*, it is so sharply separated from all other perceptions that every part of it is *clarum*. . . . A perception can be *clara* without being *distincta* but not vice versa. When someone feels an intense pain, his perception of it is *clarissima*, but it isn't always *distincta* because people often get this perception muddled with an obscure judgment

they make about something they think exists in the painful spot. . . .’ and so on. He can’t be saying anything as stupid as that intense pain is always *extremely clear*! His point is that pain is vivid, up-front, not shady or obscure. And for an idea to be *distincta* is for every nook and cranny of it to be vivid, i.e. for it as a whole to be in our sense ‘clear’.—Sometimes when *clair* and *distinct* occur together, the traditional translation is forced on us because *distinct* is used as a relational term rather than a one-place predicate;

there’s an example of this on page 137, where notions are spoken of as *claires* and *distinctes les unes des autres*—clear and distinct *from one another*.

**we:** Sometimes when this version has Descartes speaking of what ‘we’ may do, he has written of what ‘one’ may do. It is normal idiomatic French to use *on* = ‘one’ much oftener than we can use ‘one’ in English without sounding stilted. He often slides from *on* to *nous*, clearly not intending any distinction; for example, paragraph (i) on page 66.

## Letters written in 1641–1644

### to Pollot, mid-i.1641:

I have just learned the sad news of your loss [the death of Pollot's brother], and though I'm far from sure that I can say anything in that could lessen your sadness, I can't refrain from trying, so as to let you know at least that I share in your feelings. I'm not one of those who think that tears and sadness are appropriate only for women, and that to come across as a real *man* I must force myself to put on a calm expression at all times. Not long ago I suffered the loss of two people who were very close to me [his daughter (died 7.ix.40) and his father (died 17.x.40)], and I found that those who wanted to shield me from sadness only increased it, whereas I was consoled by the kindness of those whom I saw to be touched by my unhappiness. So I'm sure that you will listen to me better if I don't try to check your tears than if I tried to steer you away from a feeling that I consider quite justified. Still, there should be some moderation in our feelings; while it would be barbaric not to be distressed at all when one has good reason to be, it would also be feeble to abandon oneself completely to grief; we do ourselves no credit if we don't do our best to free ourselves from such a troublesome passion. The profession of soldiering, to which you were brought up, accustoms men to seeing their best friends suffer untimely deaths, and being accustomed to events, however distressing they are, makes them easier to bear. The loss of a brother, it seems to me, is not unlike the loss of a hand. You have already suffered the latter without, as far as I could see, being overwhelmed; so why should the former affect you so much more? [Pollot had lost an arm in battle.] [Descartes then argues thus: •for you personally the loss of an arm is

worse than the loss of a brother, because the latter can be compensated for by good friendships; and •for your brother this early death merely brings him that much faster to the joys and rewards of the afterlife. Plus a further page about lessening sadness through mental discipline and the pursuit of other activities.]

### to Mersenne, 21.i.1641:

. . . I shall be very pleased to receive yet more objections from learned critics, both philosophers and geometers, as indeed you tell me I may expect. It will be a good thing if the later critics see what the earlier ones have said, so that they don't repeat the same things. This, I think, is the best device for ensuring that any reader who finds a difficulty at any point will find it clarified in my replies; for I expect that with God's help I'll be able to give a completely satisfactory answer to all the difficulties. I'm more worried that the objections put to me will be too feeble than that they will be too powerful! But. . . I can't open the eyes of my readers, or force them to attend to the things that must be examined to ensure a clear knowledge of the truth; all I can do is *show* them the truth—like *pointing* to it.

Yesterday, Huygens sent me Morin's book, together with the three sheets written by the Englishman [Hobbes]. I have not yet read the book, but you'll see what I say in reply to the other. I have put my comments on a separate sheet, so that you can let him see it if you see fit to do so, and so that I won't have to answer the rest of the letter, which I haven't yet done. Between ourselves, I am sure it won't be worth the trouble; but the man claims to have some regard for me,



so I would be sorry to upset him. I am not worried that his philosophy resembles mine—although he wants, as I do, to handle physics purely in terms of shapes and movements. These are indeed the true principles [see Glossary], but any errors one makes in following them will stand out clearly to anyone with a modicum of understanding—so clearly that if we want to succeed we mustn't go as fast as he does. I pray God to keep you in health. Several people around here have been ill also, and lately I have been wholly occupied in paying visits and writing letters of condolence.

I come back to your letter of 23.xii, which I haven't yet answered. The passage from Augustine relevant to the thesis that *God is ineffable* [see Glossary] depends merely on a small easily understood distinction. We can't encompass in words (or even **grasp** with our minds) everything that is in God, so God is ineffable and beyond our comprehension. But there are many things in God or related to God that we can **touch** with our minds and express in words—more, indeed, than in the case of any other thing. In this sense, then, God can be known and spoken of to a very great extent.

[A paragraph about refraction, and then:] You can be sure that there's nothing in my Metaphysics that I don't believe to be either •evident by the natural light or •demonstrated precisely; and I'm sure I can make it understood by any who are able and willing to meditate on it. But I can't make people intelligent, or make them see what lies on the floor of a room if they won't go in to have a look.

[A paragraph disagreeing with something Mersenne has said about the physics of magnets, and then:] The statement

•Thoughts are merely movements of the body

is as plausible as

•Fire is ice, or

•White is black.

If we have any pair of ideas that are more different than

those of black and white, it's the ideas of movement and thought. Our only way of knowing whether two things are different or identical is to consider whether we have different ideas of them, or one and the same idea.

I would like to know *who* told you that I have been employing assistants here. That is so far from the truth that anyone who knows me even a little bit knows that it's false, but I would like to know who these people are who have fun lying at my expense.

[An expression of sorrow over the death of Eustache; and a message to Debeaune about lenses.]

#### to Mersenne for Hobbes, 21.1.1641:

I have read part of the letter that was sent to you from England and passed on to me here by Huygens. From the way he writes one can tell that the author [Hobbes] is intelligent and learned, and yet—surprisingly—he seems to miss the truth in every claim that he puts forward as his own.

I pass over the first part, about the soul and God as corporeal, the 'internal spirit' and the other matters that don't concern me. (He says that my 'subtle matter' is the same as his 'internal spirit', but I can't accept this. For one thing, he makes his 'spirit' the cause of hardness, whereas my subtle matter is the cause of softness.). . . . So I go straight to his comments on my *Optics*.

First of all, he says that I would have put things more clearly if I had spoken of *determinate motion* instead of *the determination of motion*. I don't agree with him.

[For what follows, draw a rectangle whose top corners (left to right) are A–H, bottom corners are D–G, and mid-points of the verticals C–B.]

It *can* be said that the speed of a ball going from A to B is made up of two other speeds, along the lines A–C and

A–H, I thought this way of putting it should be avoided because it might suggest that the quantity of the speeds in such composite motion. . . .remains fixed, which it certainly doesn't. Take a ball travelling horizontally from A with one unit of speed, and vertically with one unit, it will reach B with two units of speed, at the same time as another ball, moving horizontally from A with one unit of speed and vertically with two units, arrives at G with three units of speed. It would follow from this that the ratio of A–B to A–G is 2 to 3, whereas in fact it is 2 to  $\sqrt{10}$ .

[Using Pythagoras's Theorem, Descartes is calculating as follows:

$$AB^2 = AC^2 + CB^2 = 1^2 + 1^2 = 2.$$

$$AG^2 = AD^2 + DG^2 = 2^2 + 1^2 = 5$$

$$\text{Thus, } AB : AG = \sqrt{2} : \sqrt{5} = \sqrt{4} : \sqrt{10} = 2 : \sqrt{10}.$$

This note is from CSMK.]

. . . .I'm surprised that he calls my demonstration invalid, without giving any reasons except the statement that certain points are inconsistent with our experience, when in fact they square with experience and are utterly true. He seems not to have noticed the difference between •the deflection of a ball or other body falling into water and •the refraction of light. There is in fact an important twofold difference. **(i)** One deflection is towards the perpendicular while the other is away from it; and from the fact that •light rays pass more easily through water than air by a factor equal to approximately a third of their impetus it doesn't follow that •a ball must lose a third of its speed when passing through the same water; in fact there's no connection between those two. **(ii)** The angle of refraction of feeble light in a given fluid is the same as that of strong light; but when a ball is thrown into water the proportion of its speed that it loses depends on how fast it was moving when it hit the water •and thus the angle of refraction also depends on that initial speed. So it's not surprising that he has observed a lead ball thrown hard

off a cliff entering the water at an angle of •only• five degrees; for in such a case it probably loses less than a thousandth part of its speed •when it hits the water. . . .

#### to Mersenne, 28.i.1641:

This note is only to tell you that I can't send you by today's post my reply to the •second set of• objections •to the *Meditations*•. This is partly because I have had other business that has left me with hardly a day free, and partly because the objectors seem to have understood absolutely nothing of what I wrote, and merely to have read it through post-haste, leaving me with nothing to do but repeat what I have already said—which gives me more trouble than if they had put forward difficulties that gave more exercise to my mind. This is between ourselves, because I would be sorry to offend them, and you'll see by the care I take in my reply to say that I consider myself indebted to them. [Descartes didn't yet know that most of the second set of objections were by Mersenne himself.] I am also indebted to the author [Hobbes] of the •third• set of objections, which I received the other day. . . .

I have gone quickly through Morin's book •*God Exists and Created the World in Time*•. Its main fault is that he always discusses the infinite as if he had completely mastered it and could comprehend its properties. This is an almost universal fault which I have carefully tried to avoid—when I write about the infinite I •submit myself to it and don't •try to determine what it is or is not. Then, when he sets about proving in his sixteenth theorem that God exists, doing this before expounding any controversial points, he rests his argument on •his alleged proof that the earth doesn't move and on •the •supposed fact that• the whole sky revolves around it—neither of which he has proved. He supposes that there can't be an infinite number, and he couldn't prove

that either. Everything that he offers right up to the end is far from the geometrical self-evidence and certainty that he seemed to promise at the beginning. This also is between ourselves, please, because I don't want to hurt his feelings.

[A page in which Descartes comments on recent work by Desargues, applying geometry and optics to the measurement of time. Descartes applauds the theory but doesn't think there will be enough precision in practice.]

I claim that we have ideas not only of everything in our intellect but also of everything in the will. We can't will anything without knowing that we will it, and we can't know this except by means of an idea of whatever-it-is that we are setting ourselves to do. But I don't insist that the idea is different from the act itself.

Apparently there won't be any difficulty in adapting •theology to my style of philosophising. I don't see that anything in •it needs changing except in the case of transubstantiation [see Glossary], which is clear and easy to explain on my principles. I'll have to explain it in my Physics, along with the first chapter of Genesis; I propose to send these explanations to the Sorbonne to be examined before the work is printed. If you •think there are other things that call for the writing of a whole new course of theology, and •are willing to tackle this yourself, I'll count that a favour and do my best to help you in it.

[A page in which Descartes comments on the persons and the recent work of a couple of people, and then:] I will be glad if people put to me many objections, the strongest they can find, for I look to those to make the truth stand out all the better. But if anyone wants to make fresh objections, please show him the objections you have already sent to me and my answers to them, so that he doesn't come up with things that I have already treated.

I proved quite explicitly that God was the creator of all things, and I proved all his other attributes at the same time: I did this by **(i)** proving his existence from our idea of him and also by **(ii)** arguing from the fact that we have this idea to the conclusion that he created us.

[**(i)** is a version of what came to be called 'the ontological argument' for God's existence. Simply and crudely: 'The name "God" means "item that is existent and . . . so on", so that "God doesn't exist" is a contradiction in terms.' **(ii)** is a causal argument: 'The *fact* that we have an idea of God-as-having-all-perfections must have been caused somehow, and certain views about how causation must work imply that the cause must itself have all perfections.']

But I see that people take more notice of chapter-headings than of anything else; which makes me think that the title of the Second Meditation, 'The nature of the human mind', could have added to it 'how it is better known than the body', so that readers won't think I was intending to prove its immortality in that place. So in the Third, the title 'God' should have added to it '—that he exists'. And in the Fifth, 'The essence of material things' should have the addition 'and again that God exists'. And in the Sixth 'The existence of material things' should have added '—and the real distinction between mind and body'. These are the things I want people mainly to notice. But I included many other things besides; and I now tell you, between ourselves, that these six Meditations contain all the foundations of my physics. But please don't tell people this, for that might make it harder for supporters of Aristotle to approve the *Meditations*. I hope that readers will gradually get used to *my* principles, and recognise their truth, before noticing that they destroy *Aristotle's*.

⊕ [7.ii.41: Hobbes writes to Mersenne for Descartes, a dozen forceful pages in Latin, in response to Descartes's 21.i.41 letter to Mersenne for Hobbes.]

⊕ [18.ii.41: Descartes writes to Mersenne for Hobbes, five Latin pages, giving as good as he got.]

**to Mersenne, 4.iii.1641:**

Having now had time to read the last piece by Englishman [Hobbes], I find complete confirmation of the opinion of him that I expressed to you two weeks ago. I think it would be best for me to have nothing more to do with him, and thus to refrain from answering him. If his temperament is what I think it is, it will be hard for us to exchange views without becoming enemies. It's better for us both to leave things where they are. Please don't tell him any more than you have to of what you know of my unpublished views, because I'm pretty sure that this is someone who is looking to acquire a reputation at my expense, and by sharp practice. If you have promised him that you'll get me to reply to his latest, you may—if you like—tell him that I shan't reply because I think you can defend me better than I can defend myself. And to reduce the amount of trouble this gives you, I'll give you my view on each of his ten points.

[In five pages of Latin, Descartes responds to four of Hobbes's points, and then breaks off:] I would be *ashamed* to spend more time chasing down the rest of his errors, which are distributed all through what he wrote. [He expresses regret that Debeaune and Mersenne think well of Hobbes, and predicts that this won't last, though he concedes that Hobbes's writing style is lively and expressive. Then most of two pages on a point in physics that Roberval got partly right (Descartes thinks), on the physics of missiles, and on Fermat (who 'knows mathematics but in my experience always reasons badly in philosophy'). Then:]

I sent you my book so as to get the verdict on it of the gentlemen of the Sorbonne, and *not* to take on the chore of

arguing with every petty-minded critic who wants to join in the battle of fighting-Descartes-with-objections. Still, if some swaggering warrior wants to enter the fray, bring him on!—I shan't refuse to answer him if his comments are judged to be good enough to print. I'm grateful to those who offered the earlier comments [the Second Set of Objections by Mersenne and others; see the 28.i.41 letter on page 124]; if they want to comment further on my replies, I'll be happy to reply to those too. I'm not sending you •my replies to Arnauld yet, because I have had a lot of other things to do and I don't want to rush •them; but I expect to send them to you within a week. As soon as you receive them, I think it will be time to send all the material to the gentlemen of the Sorbonne to obtain their verdict, and then to have it printed—at least if the verdict is favourable, as I expect it to be. ·It will be time to get on with the publication rather than waiting for even more objections· because I think that adding more objections (unless they are first-rate) would merely fatten the book and spoil it.

Please don't change anything in my copy without letting me know, for it's extremely easy for a 'correction' to embody a misinterpretation—indeed, it could easily happen even to me if I were looking at the phrases in isolation, as one does to correct punctuation. [He cites an episode in which a 'correction' of his own work involved a misinterpretation.]

I must also ask you to correct these words in my reply to the objections of Caterus:

'When we attend to the immense power of this being, we shan't be able to think of its existence as possible without also recognising that <•there can be some power by means of which it exists, and that •this power can't be understood as residing in anything other than that same supremely powerful being; and hence concluding that> it can exist by its own power.'

The passage ‘. . . there can be. . . concluding that’ [marked off here by <angle-brackets>] should be deleted, so that the passage reads:

‘When we attend to the immense power of this being, we shan’t be able to think of its existence as possible without also recognising that the being can exist by its own power.’

But please correct this (in all the copies) in such a way that the words I want omitted—‘<that there can be . . . concluding that>’—won’t be decipherable by any reader. Many people are more curious to read and examine words that have been erased than any other words; they are looking for places where the author thought he had gone wrong, finding in them some ground for objections and attacking him in the place that he himself judged to be the weakest.

Between ourselves, I think that this is why Arnauld paid so much attention to my statement that ‘God derives his existence from himself in a positive sense’. I remember that my first draft of this passage was too crude; but in the later version I amended and refined it so much that if Arnauld had merely read the corrections and ignored the deleted words he might have had nothing to say. . . . I shall explain this and other matters at more length in my reply to Arnauld. I’m in his debt for his objections. I think they are the best of all the sets of objections, not because they press me harder but because he has entered more thoroughly into the sense of what I wrote. I knew in advance that few people would grasp my meaning, given how few are willing or able to pause and meditate.

[A final page, mostly about Debeaune and lens-grinding.]

### to Mersenne, 18.iii.1641:

I’m sending you at last my reply Arnauld’s objections, asking you to make some changes in my *Meditations*, thus letting it be known that I have deferred to his judgement; so that others, seeing how ready I am to take advice, may •tell me more openly their reasons for disagreeing with me and •be less stubborn in opposing me if they have none.

(i) In the Synopsis of the Fourth Meditation, after the words ‘make intelligible what is to come later’, please add

‘But here it should be noted in passing that I don’t deal at all with sin, i.e. the error that is committed in pursuing good and evil, but only with the error that occurs in distinguishing true from false. And there’s no discussion of matters pertaining to faith or the conduct of life, but simply of speculative [see Glossary] truths that are known solely by means of the natural light.’

Put the words between brackets, to make it clear that they are an addition.

(ii) In the Sixth Meditation, after the words ‘since I didn’t yet know the author of my being’ please add, again in brackets, the words ‘or at least I was pretending not to know’.

(iii) In my Reply to the First Objections, where I discuss whether God can be said to be caused by himself, at the words ‘Hence if I thought that nothing could somehow have the same relation to itself. . . ,’ please put in the margin ‘Note that these words •cause of itself• mean only that there may be a thing whose essence is such that it needs no efficient cause in order to exist.’

(iv) A little further on, at the words ‘Although God has always existed, since it is he who in fact preserves himself’, put in the margin: ‘Note that this isn’t a thesis about the

kind of preservation that comes about through the positive influence of an efficient cause; it's merely the thesis that the existence of God is such that he must always exist.'

(v) Three lines later there occur the words

'For there are some who think it is impossible for anything to be its own efficient cause, and hence. . . .

Please replace that by this:

'Those who attend only to the literal and strict meaning of "efficient cause" think that nothing could be the efficient cause of itself. It hasn't occurred to them that there's room for another kind of cause, *analogous to an efficient cause* ·strictly so-called·, and hence. . . .

I didn't mean to say that something could be its own efficient cause with 'efficient' taken in its strict sense; I meant only that when we ask whether anything can exist 'from itself' the question mustn't be taken to concern 'efficient causality' [see Glossary] strictly so-called (construed in that way the question would be futile, as I said). . . .

[Three minor episodes are discussed; and then Descartes, triggered by Mersenne's most recent letter, writes two pages refuting a thesis of Hobbes's about why bodies bounce back after collisions, and expressing of pleasure that Picot has come to have some liking for the *Meditations*. Then:]

I leave you to take care of the titles of my *Metaphysics* [here = 'the individual *Meditations*']—I'm appointing you as godfather, if you'll accept. As for the objections: it's a good idea to call them 'First Objections', 'Second Objections', and so on; and to speak of my 'Replies' to the objections rather than 'Solutions' of them—leaving it to the reader to judge whether my replies contain solutions. . . .

I'm not yet sending you the last sheet of my reply to Arnauld, where I explain transubstantiation in terms of my principles; I want first to read the decrees of the Council of Trent, and I haven't yet been able to obtain them.

⊕ [30.iii.41: Hobbes writes to Mersenne for Descartes, eight pages of Latin responding to Descartes's responses.]

### to Mersenne, 31.iii.1641:

I am sending you the remainder of my reply to Arnauld's objections. You will see that in it I reconcile my philosophy with the councils' doctrine of the Holy Sacrament, which I maintain couldn't be satisfactorily explained by means of the traditional [here = 'ordinary scholastic'] philosophy. Indeed, I think that if my philosophy had been known first, the other would have been rejected as clashing with the Faith. I'm not joking; I really do believe this. So I'm not willing to keep silent on this matter; I shall fight with their own weapons the people who mix Aristotle with the Bible and misuse the Church's authority in order to vent their passions—I mean the ones who had Galileo condemned. They would have my views condemned in the same way if they could; but if that question ever does come up, I'm sure I can show that none of the tenets of their philosophy squares with the Faith as well as my doctrines do.

As soon as Arnauld has seen my Replies, I think it will be time to submit the complete work to the doctors [see Glossary] of the Sorbonne, so as to get their opinion and then have the work printed. I leave entirely to you such matters as the size of the volume, the type-face, the titles I have left out, and any notes for the reader that need to be added to what I have written. You have already taken so much trouble over the book that the greater part of it belongs to you. . . .

### to Mersenne for Hobbes, 21.iv.1641:

The communication you sent me from the Englishman [Hobbes] says that 'his 'spirit' and my 'subtle matter' are

the same thing, that •he arrived at an explanation of light and sounds using his method as early as 1630, and that •he believes that someone passed his results along to me. This is childish and ridiculous. If he is afraid that his philosophy will be stolen, let him publish it. As for me, I won't hurry the publication of my own work on his account.

His latest arguments (sent to me in your letter) are as bad as all the others I have seen from him. **(i)** *Man* and *Socrates* are not two different substances, but still the term 'Socrates' signifies something other than 'man' does, namely the individual or particular differentiating characteristics •of the individual Socrates•. Similarly, *determinate motion* is not different from *motion*, but the determination is something other than the motion.

**(ii)** It isn't true that the efficient cause of *motion* is also the efficient cause of *the determination •of motion•*. For example, if I throw a ball against a wall, the wall determines the ball to bounce back but it isn't the cause of the motion.

**(iii)** He employs a delicate subtlety in asking whether the determination is *in* the motion 'as in a subject'—as if the question here were 'Is the motion a substance or an accident?'

[If you find that puzzling, first see Glossary for 'accident'. Then: Descartes has distinguished a thing's *moving* from its *moving at 5mph*, saying that being-at-5mph is an accident or property or feature of the movement; Hobbes has suggested that that treats the relation of

•being-at-5mph to •the movement

as though it were on a par with the relation of

•being-in-motion to (for example) •a rolling ball,

thus treating a motion as though it were a substance like a rolling ball.]

In fact there's nothing awkward or absurd about saying that an accident is the subject of another accident, as when we say that quantity is the subject of other accidents. When I said that •the motion is to •its determination as •a flat body is to •its top or surface, I didn't mean to compare the

motion and the body as if they were two substances; I was comparing them merely as one would compare two concrete things, to show that they were different from things that could be treated merely as abstractions. [Descartes is here talking about *the motion* in question as a particular individual case of motion, a 'concrete thing' as distinct from *movingness* or *being-in-motion*, which is abstract.]

**(iv)** It is very inept of him to infer that if one determination is altered, so must the others be, on the grounds that (as he puts it) 'all the determinations are merely one single accident under different names'. On his view, then, *man* and *Socrates* are just a single thing under different names, implying that no individual characteristic of Socrates could perish—for example his knowledge of philosophy—without his simultaneously ceasing to be a man.

[Descartes •makes another point of the same general kind, •complains that Hobbes made a great fuss over what was obviously a printer's error, and •ends the letter thus:] He is also wrong when he says that I approve of the parts of his work that I don't criticise, parts that I haven't said a word about! The fact is that I haven't seen in them anything that makes me think that refuting them would be time well spent.

#### to Mersenne, 21.iv.1641:

[Mersenne is asked to settle any last-minute questions that come up over the publication of the *Meditations* in an edition including the Objections and Replies. Descartes gives two reasons for this delegating of editorial control:] You are more careful about these matters than I could be; and you can judge what is prudent better than I can, because you are on the spot.

I'm surprised at the objection of your doctors, namely that according to my philosophy we have no certainty that

the priest is holding the sacramental bread at the altar, or that he has water for the baptism etc. Who, even among scholastic philosophers, ever said that there's any more than moral certainty [see Glossary] about such things? Theologians say that it's a matter of faith to believe that the body of Jesus Christ is in the Eucharist, but they don't say that it's a matter of faith to believe that it is in this particular piece of bread. For that you have to suppose, as a matter of ordinary human belief, that the priest intended to consecrate the bread, and that he pronounced the words, and is duly ordained, etc.—which are by no means matters of faith.

Those who say that God continually deceives the damned, and that he might similarly be continually deceiving us, contradict the foundation of faith and all our belief, which is that *It isn't possible that God lies*. This is said in so many places in St Augustine, St Thomas and others that I'm surprised that any theologian denies it. They will have to abandon all certainty if they don't admit as an axiom that *It isn't possible that God deceives us*.

I wrote that in our case indifference [see Glossary] is a defect rather than a perfection of freedom; but it doesn't follow that the same is the case with God. Still, I don't know that it is an article of faith to believe that God is indifferent; and I'm confident that Father Gibieuf will do a good job of defending my position on this matter, because I wrote nothing that isn't in accord with what he says in his book *The Liberty of God and Man*.

I didn't *anywhere* deny God's immediate concurrence [see Glossary] in all things; indeed I explicitly affirmed it in my reply to Caterus.

There was no need for me to reply at greater length to the Englishman, I thought, because his objections struck me as so implausible that a longer answer would have given them too much importance.

The doctor who says that we can wonder *whether we are thinking* as well as we can wonder anything is flatly in conflict with the natural light—so much so that surely no thinking person will agree with him. . . .

The sense in which I include imaginations in the definition of *cogitatio* or 'thought' differs from the sense in which I exclude them. The forms or corporeal species [see Glossary] that must be in the brain for us to imagine anything are not thoughts; but when the mind imagines or turns towards those impressions, its operation is a thought.

The earlier letter in which you wrote me objections about the pineal gland must have been lost, unless you forgot to write them. The only objections that have reached me are your more recent ones, namely that the gland **(i)** has no nerve running to it and **(ii)** is too mobile to be the seat of the common sense [see Glossary]. In fact, these two things tell entirely in my favour. **(i)** Each nerve is assigned to a particular sense or movement, some going to the eyes, others to the ears, arms, and so on. If the pineal gland specially connected with one in particular, that would show that it is *not* the seat of the common sense, because that must be connected to all of them in the same way. The only way for them all to be connected with the pineal gland is by means of the spirits, and that is how the connection is in fact made. **(ii)** It is certain too that the seat of the common sense must be •very mobile (to receive all the impressions coming from the senses) but •of such a kind that it is movable only by the spirits (which transmit these impressions). Only the pineal gland fits this •double•-description.

*Anima* in good Latin signifies air, or breath; it is in a transferred sense, I think, that it means mind. That's why I said that it is 'often taken for a corporeal thing'.

The axiom 'Whatever can do the greater can do the lesser' applies only where the greater and the lesser •are operations



of the same general kind or •involve the same power or ability. Who doubts that a human being who couldn't make a lantern might be able to make a good speech?

[In a final paragraph Descartes rebuts two charges of having lifted results from other writers without acknowledgment. The one that stings more concerns Gassendi; Descartes denies having stolen anything from him and suggests that there has been theft in the other direction.]

### to Regius, v.1641:

Our entire dispute over *the threefold soul* is more verbal than real.

(i) A Roman Catholic ·such as I am· isn't allowed to say that the human soul is *threefold*; and I'm afraid that people will impute to me the views expressed in your thesis, so I'd be glad if you would, ·although you aren't a Catholic·, avoid this way of talking.

(ii) Although the powers of growth and sensation may be *basic* acts in the case of the lower animals, it's not like that in the case of man, because

**the rest of the sentence:** *mens prior est, saltem dignitate.*

**which means:** mind is prior [to such acts], at least in respect of status.

**what he is getting at:** mind is more basic than such acts; they may not be *preceded* by acts of the mind, but they owe their status to the mind's involvement—when you arm goes up, for example, you count as *raising your arm* only because of the role of your mind (specifically, your intention) in this event.

(iii) •Although the items having something in common can be regarded by logicians as belonging to a single genus, not every such group is a true genus. •And a classification

isn't sound unless it divides the members of a true genus into true species. And although the divisions have to be opposed and different, for the classification to be sound they mustn't be too different. Consider this classification of the parts of the human body:

- the nose
- everything but the nose.

That classification is faulty, as yours is, because of the excessive inequality of the divisions.

(iv) I don't admit that the powers of growth and sensation in animals deserve the name 'soul' [Latin *anima*], as does the mind in human beings. People have thought otherwise because they didn't know that animals lack a mind. So the term 'soul' is ambiguous as used of animals and of human beings.

### to Regius, v.1641:

It would be wrong for me to *complain* that you and ·your pupil· de Raei had the honesty to place my name at the head of your theses; but I don't know how I can *thank* you for this. All I see in it is more work for me: from now on people will believe that my opinions are the same as yours, and I'll be trapped into having to defend your propositions as best I can. So I'll have to examine with extreme care everything you have sent me to read, for fear of letting pass something that I wouldn't want to defend.

The first thing I don't agree with is your claim that 'men have a threefold soul'. In my religion that's a heretical thing to say; and quite apart from religion, it goes against logic to conceive *soul* as a genus whose species are •mind, •vegetative power, and •locomotive power of animals. . . . ·This is all wrong, because· this locomotive power is not even of a different species from vegetative power, and it belongs to

a totally different genus from *mind*. But since we don't disagree about the reality, as distinct from the terminology, I'll tell you how I would explain the matter.

There is only one soul in human beings, the rational soul; for any human action—properly so-called—depends on reason. The vegetative power and the power of moving the body, which are called the vegetative and sensitive 'souls' in plants and animals, exist also in human beings; but in humans they shouldn't be called 'souls' because they aren't the basic source of human actions and belong to a totally different genus from *rational soul*. [Then some clipped, obscure bits about uses of 'soul'.]

Finally, where you say

'Willing and understanding differ only as different ways of acting in regard to different objects',

I would prefer

'Willing and understanding differ only as the activity and passivity of one and the same substance.'

For strictly speaking, understanding is the passivity of the mind and willing is its activity; but because •we can't will anything without understanding what we will, and •we hardly ever understand something without at the same time willing something, we don't easily distinguish passivity from activity in this context.

Voetius's criticism on this point in no way tells against you. Theologians do indeed say that no created substance is the immediate principle [see Glossary] of its own operation; but by this they mean that no created thing can operate without the concurrence [see Glossary] of God. They don't mean—*absurdly!*—that the created thing has a faculty distinct from itself to operate by, so that although the created thing couldn't cause its own operation this faculty that it has could do so. . . .

When you discuss colours, I can't see why you exclude blackness, because the other colours are also merely modes. I would simply say: 'Blackness too is commonly counted as a colour, yet it is nothing but a certain arrangement. . . .'

[A paragraph in which Descartes recommends replacing 'necessarily' by 'easily' in one place, and contracting 'and therefore' to 'and' in another.]

To say that the passions have their seat 'in the brain' is paradoxical, and I don't think it is actually your own view. It's true that the spirits that move the muscles come from the brain, but the seat of the passions has to be the part of the body that is most affected by them, which is undoubtedly the heart. So I would say: 'The principal seat of the passions, considered as corporeal, is in the heart, because that is what is principally affected by them; but considered as also affecting the mind, their seat is solely in the brain, because the brain alone can directly act upon the mind.'

It is also paradoxical to say that 'reception is an action', when in fact it is merely a passion [see Glossary], quite contrary to action. But you could perhaps retain what you have written, by saying this: 'Reception is an automatic animal action, or rather passion, whereby we receive the movements of things; for here we are linking passions with actions so as to include under one category everything that occurs in man.'

[Another page of suggestions, corrections, warnings, encouragement. Then finally:] I don't agree with your definition of actions as 'operations that a man performs by the power of his soul and his body'. I'm in the camp of those who deny that man understands by means of the body, and I'm not impressed by your argument to prove the contrary. It's true that the mind can be •hindered by the body, but when it's a matter of understanding immaterial things it can't be •helped by the body, only harmed.

⊕ [19.v.41: Gassendi writes to Mersenne for Descartes, two Latin pages of philosophical criticisms.]

### to Mersenne, 16.vi.1641:

In the two little sheets of objections that you sent me [part of the Sixth Objections to the *Meditations*] someone asks what I meant by ‘idea’, and seems to promise more objections; and the way he begins makes me look to him for the best and strongest objections that can be made. If he wants my answer to his question now, without waiting for me to reply to all of this set of objections, you can tell him the gist of it, namely:

I use the word ‘idea’ to mean everything that can be in our thought. And I distinguish three kinds. •Some are **adventitious** [= ‘caused from outside the person’], such as our everyday idea of the sun; •others are **constructed** or made up, e.g. the idea of the sun that the astronomers construct by their reasoning; and •yet others are **innate**, such as the ideas of *God*, *mind*, *body*, *triangle*, and in general all the ideas that represent true, immutable and eternal essences.

Now, if from a constructed idea I infer what I explicitly put into it when I was constructing it, I would obviously be begging the question [see Glossary]; but it’s different when I draw out from an innate idea something that was implicitly contained in it without my having noticed it. Thus I can draw out from the idea of a triangle that its three angles equal two right angles, and from the idea of God that he exists, etc. So far from being a begging of the question, this method of demonstration is the most perfect of all—even Aristotle says so! . . .

### to Mersenne, 23.vi.1641:

I am sending you the remainder of Gassendi’s objections, together with my reply. If possible please have the objections printed before their author sees my reply; because I find (between ourselves) that they contain so little good argument that I don’t think he’ll want to allow them to be printed once he has seen my reply. I on the other hand very much want them printed: •I would be sorry to have wasted my time in composing my reply; and •some people would think that it was I who refused to have them published because I couldn’t deal with his objections. I’m also happy for his name to go at the head of the objections, just as he has put it. If he is unwilling to allow this, he’s entitled to prevent it because the other objectors haven’t given their names; but he can’t prevent his objections from being published.—Please give the publisher the same copy that I have seen, for printing, so that there are no discrepancies.

[Four pages concerning •arrangements for the publishing of the Objections and Replies, •a recent medical book ‘which I have no great need to see’, •changes to some possibly tactless wording in the letter to the faculty of the Sorbonne, •a correction to a misunderstanding of what he meant when writing of ‘the surface of the bread’ in the Eucharist (not a part of the bread, or a part of the surrounding air, but *what separates* the bread from the air); •the pleasure of having Gibieuf on his side; Picot’s presence in Leiden (where Descartes now is). Then:]

You’ll see that I have done my best to deal with Gassendi in an honourable and considerate way. But he has given me so many grounds to despise him, and to point out his lack of common sense and his inability to argue rationally, that I’d have been failing to stand up for my own just cause if I had said any less than I did—and I could have said much more!

**to Mersenne, vii.1641:**

The author the Latin letter to you that you passed on to me ·on 19.v.41·—[we don't know who that author was]—hasn't yet taken a side in the judgment that we want to make. He expresses himself so well when presenting his own views that I can't believe that he has misunderstood others. I'm convinced that after getting clear about his own opinions he has worked to get a sense of ·the frame of mind of· those who disagree with him. So I predict that this won't be the last time he and I clash with one another. This first letter from him is like a *challenge to a duel*, presented so as to see how I take it, and ·to see· whether I, after taking the battlefield and challenging all comers, will make a show of trying my weapons against his, my strengths of mind against his. I would really enjoy engaging with people with intellects like his, if they didn't go—as he has—too far to one side from the outset. I'm afraid that •the work I put in on him will be wasted: however hard I try to satisfy him and to extract him from the unhappy battle he's engaged in, I fear that he'll plunge back in, looking for new ways to contradict me.

He says that he doesn't understand what I mean by 'the idea of God', 'the idea of the soul', and 'the ideas of imperceptible things'—can we believe him? All I mean is what *he* must have meant when he wrote to you that he didn't understand my meaning. He doesn't say that he has no conceptions corresponding to 'God', 'soul', and 'imperceptible things'; he just says that he doesn't know what he's supposed to understand by 'the idea of' these things. But if he had any conception corresponding to these expressions (as he surely did), then he knew at the same time what was to be understood by 'the ideas of' those things, namely the conception that he himself had. I don't call the images painted in the physical imagination 'ideas'; by 'idea' I mean

in general everything that is in our mind when we conceive something, no matter how we conceive it.

But I realise that he isn't one of those who think they can't conceive something if they can't imagine it. He grasps that I don't think of •imagining as our only way of •thinking or •conceiving, and he shows well enough that he doesn't think so either—as witness his saying that God can't be conceived by the imagination. But if its not by the imagination that God is conceived, then when we speak of God either

•we conceive *nothing* (which would show a terrible blindness), or

•we conceive him in some other way.

And whatever way that is, it must involve our having the idea of him; if we express *anything* by our words, when we understand what we're saying, we must we have in us the idea of the thing that is signified by our words.

Thus, if he takes 'idea' in the way I explicitly said that I took it ·in the Third Meditation·, and isn't confused by those who restrict it to the images of material things formed in the imagination, it will be easy for him to understand what I mean by 'the idea of God', namely what all men habitually understand when they speak of him. He *must* have understood the phrase in that way himself—otherwise how could he have said that God is infinite and incomprehensible and can't be represented by our imagination? How could he affirm that •God has these attributes and countless others that express his greatness to us, unless he had the idea of •him? [Descartes then goes on hammering this point home.]

In the case of the soul, things are even clearer. As I have shown, the soul is nothing but *a thing that thinks*; so we can't possibly think of anything

**x**

without at the same time having the idea of

**our soul as a thing capable of thinking of x.**

It's true that a soul can't be imagined, i.e. represented by a corporeal image. But that isn't surprising, because our imagination can only represent objects of sense-perception; so we can't imagine it—or form an image of it—because our soul has no colour or smell or taste, or anything that belongs to the body. But that doesn't make it any less conceivable; on the contrary, since it's by means of the soul that we conceive all other things, it is more conceivable on its own than all other things taken together.

I have to tell you next that your friend has *entirely* missed my meaning when he distinguishes two kinds of ideas thus:

- ideas in the corporeal imagination are expressed by names, and
- ideas in the mind are expressed by propositions.

Whether an idea belongs to the mind or the imagination doesn't depend on whether it can be expressed by a name or by a proposition; it could be expressed either way. What makes the difference—that we are trying too pin down here—is *how* an idea is conceived. Thus:

- if we conceive something with no image coming into it, that's an idea of pure mind;
- if we conceive something through an image, we're using an idea of the imagination,

Our mind has hardly any limits, whereas our imagination is severely limited: there are very few things, even corporeal things, that we can •imagine, though we can •conceive them. As for the entire science that considers only sizes, shapes and movements—you might think it is most under the sway of our imagination, but those who have looked into it even in a fairly shallow way know that this science rests not on the phantasms of our imagination but only on the vivid and clear notions of our mind.

He thinks I am committed to the view that the idea of God must be expressed by the proposition 'God exists', and

concludes that my main argument to prove God's existence is a mere begging of the question [see Glossary]. How can he get *that* out of anything I have written? He must be very sharp-eyed to see something there that I never meant to say and that never entered my mind before I saw his letter! I based the proof of the existence of God on the idea that I find in myself of *a supremely perfect being*, which is the ordinary notion we have of God. It's true that merely thinking of such a being leads us to the knowledge of his existence, doing this so easily that conceiving of God is almost the same thing as conceiving that he exists; but still our idea of God, or of a supremely perfect being, is quite different from the proposition *God exists*, so that the one can serve as a means or premise to prove the other.

In the same way, anyone who comes to know the nature of our soul by the steps I used, and thus recognises that it is a spiritual substance—because he sees that it has all the attributes that belong to spiritual substances—doesn't have to be a great philosopher to conclude that the soul isn't corporeal! On the other hand, to •see that the conclusion *doesn't* follow from the premises and to •find some flaw in this argument—that *does* require a mind that is open, an *unusual* sort of mind. That is what I ask him to show me, and I expect to learn from him if he is willing to take the trouble to teach me. I for my part will not refuse him my little clarifications, if he needs them and is willing to proceed in good faith.

⊕ [vii.41: Hyperaspistes writes to Descartes, responding to his replies to Gassendi's objections to the *Meditations*. This person was probably a friend of Gassendi's, but Descartes didn't know his identity and nor do we. 'Hyperaspistes' was his own chosen *nom de plume*; it is Greek, meaning 'defender' or 'shield-bearer'. The main points in his letter will be given in notes on Descartes's viii.41 letter in reply.]

⊕ [17.vii.41: Huygens writes to Descartes enclosing a back-up copy of the printers' proofs of the *Meditations*; he asks to be allowed to have this back for slower and more careful reading; and rapturously applauds what he has read of the work.]

**to Mersenne, 22.vii.1641:**

I'm returning the Sixth Objections to you, with my replies. The objections were made up of various papers that you sent me at different times, so I have copied them out in my own writing in the way it seemed they could most conveniently be combined. . . .

As regards printers' errors, I realise that they aren't very important, and I assure you that I'm as much in your debt for your care in correcting them as I would be if every single one had been eliminated. I know how much work you have put into this, and I also know that it's morally impossible [see Glossary] to pick up every error, especially when proof-reading someone else's writings.

I very much approve your cutting out what I said at the end of my reply to Arnauld, especially if this can help us to get a formal approval for the book [see page 133]. But even if we don't get it, I'm sure I won't be very upset.

As for Gassendi: I think it would be very unfair for him to take offence at what I have said, for I have taken great care to keep things on a level—matching his compliments by compliments, and his attacks by attacks. And that still involves a tilt in his favour, because I have always heard it said that the first blow is worth two, so that things would have been fair if I had *doubled* his attacks. [He conjectures that misunderstandings helped to create the stand-off between Gassendi and himself, lists several, which he says are 'not my fault'.]

[He reports having read 'your Hyperaspistes' and is willing to reply; but all this is intended for publication, and readers will be wearied by repetitions and irrelevances; so Descartes asks Mersenne to get Hyperaspistes to trim and cleanse his document before Descartes replies to it. [This evidently didn't happen.]]

You ask 'Are our ideas expressed by a simple term?' I don't understand the question. Words are human inventions, so it's up to us whether we use one word or several to express the same thing. But I explained in my Reply to the First Objections how a triangle inscribed in a square can be taken as a single idea or as several. Altogether, I think that all the ideas that involve no affirmation or negation are *innate* in us; because when such an idea arises in us, the sense-organs don't bring us anything like it, so the idea must have been in us already.

**to DeLaunay, 22.vii.1641:**

. . . .At the end of the last set of replies to objections that I sent to Mersenne I only spoke in a general way about the reason why *most* people have trouble seeing that the soul is distinct from the body. It is as follows. Our earliest childhood judgements have accustomed us to attribute to the body many things that belong only to the soul, and to attribute to the soul many things that belong only to the body, a tendency that has been strengthened in us by the influence of traditional philosophy. So people commonly mingle the two ideas of body and of soul in constructing the ideas of •real qualities [see Glossary] and •substantial forms [see Glossary], ideas that I think should be altogether rejected. If you examine physics carefully you'll find that everything in it that the intellect can deal with is reducible to a set of kinds that are •so few in number and captured by notions

that are •so clear and •so distinct from one another, that I don't think you can fail to recognise whether in conceiving one thing apart from another you're doing this only by a mental abstraction or because the things are truly distinct. When things are separated only by a mental abstraction, you can't help noticing, when you bring them together in a single thought, that they are conjoined, unified; and with soul and body you can't see any such conjunction provided you conceive them in the right way—one as *what fills space* and the other as *what thinks*. Indeed I don't know any other pair of ideas in the whole of nature that are as different from each other as these two (except for pairs of which one member is our idea of God). But here I'm merely putting forward my own opinion; I don't have such a high regard for it that I wouldn't be ready to change it if I could learn better from those whose light is brighter than mine.

### to Hyperaspistes, viii.1641:

The objections I received before the arrival of yours ·of vii.41· have been sent to the printer, and I decided that any further objections that came in should be reserved for a second volume. But your objections are presented as covering all the remaining ground, so I gladly hasten to reply to them so that they can be printed with the others. [They arrived too late for that.]

[The 14-point defence matches Hyperaspistes' 14-point attack. In this presentation each defence is preceded by a very short statement of the attack, within quotation-marks but not always a precise quotation.]

**(1)** [It is more important to avoid going wrong in everyday life than to avoid error in metaphysics; so why do you suppose or demand a lesser truth in morals than in science?] It would indeed be desirable to have as much certainty for the conduct of our lives as is needed for the acquisition of knowledge; but it can't be had.

This can be shown *a priori* [see Glossary] from the fact that a human ·body·, as a composite entity, is naturally corruptible, while the mind is incorruptible and immortal. It can be shown even more easily *a posteriori* from the consequences that would follow. Consider a case like this:

A man decides to eat nothing, because he's never certain that his food hasn't been poisoned, and he thinks that •he isn't obliged to eat when it isn't transparently clear that the food will keep him alive, and that •it is better to wait for death by abstaining than to kill himself by eating.

Such a man would be rightly regarded as mad and as responsible for his own death. ·Of course it's right to think that the man should steer by the probabilities·: even if *in fact* the only food he can get is poisoned, and *in fact* he is in some strange way helped rather than harmed by not eating, if the probabilities he knows favour his eating, he should eat. This is so self-evident to everyone that I'm surprised that anyone could think otherwise.

**(2)** [You wrote "From the fact that the mind doesn't work as perfectly when it is in the body of an infant as when it's in an adult's body, it doesn't follow that it is made more or less perfect by the body." But nor does it follow that it is not.'] I nowhere said 'because the mind acts less perfectly in infancy than in adulthood it follows that it is no less perfect'; so I can't be criticised on that account. But it doesn't follow either that it is more imperfect, and I had a right to criticise anyone who assumes that it is. And I had reason to assert that the human soul is always thinking, even in the unborn child. What more certain or evident reason could be wished for than the one I gave? I proved that the nature or essence of the soul consists in its thinking, just as the essence of the body consists in its being extended. Nothing can be deprived of its own essence; so it seems to me that someone who says

At the times when (my memory tells me) I wasn't aware of my soul's thinking it *wasn't thinking* deserves no more attention than someone who says

At the times when (my memory tells me) I wasn't aware of my body's being extended it *wasn't extended*.

This doesn't mean that I believe that the mind of an infant meditates on metaphysics in its mother's womb! 'Well,' you'll want to know, 'what is it thinking about?' I have a conjecture about that, assuming that it's legitimate to make **conjectures** about something one doesn't see clearly. The background fact is this: We know by experience that our minds are so closely joined to our bodies as to be almost always acted upon by them; when the mind is thriving in an adult and healthy body it has some liberty to think of things other than the ones presented by the senses, but we know those who are sick or asleep or very young don't have the same liberty, and the younger they are the less liberty they have. So it seems most reasonable to **conjecture** that a mind newly united to an infant's body is wholly occupied in feeling—i.e. perceiving in a confused way—the ideas of pain, pleasure, heat, cold and other such ideas that arise from its union and intermingling (so to speak) with the body. Still, even at that time it has in itself the ideas of God, of itself and of all the truths that are called self-evident, just as adult human beings have these ideas when they aren't attending to them; for it doesn't *acquire* these ideas later on, as it grows older. I have no doubt that if it—the child's soul—were released from the prison of the body it would find them within itself.

This view doesn't involve us in any difficulties such as you find in conceiving the relation between incorporeal thoughts in the mind and corporeal traces in the brain. Though the mind and the body are distinct things, the mind is none the less joined to the body and is affected

by traces impressed on it, and is able to impress new traces on the body on its own account. This is no harder for us to understand than it is for those who believe in *real accidents* [see Glossary] to understand that such accidents act on a corporeal substance while being quite different in kind from it. ('Different in kind'? Yes, because no real **accident**—if there were any such things—could be 'corporeal' in the proper sense of that term, namely 'made up of the **substance** called body'; so they are no more corporeal than minds are.) Thus, when a mind joined to a body thinks of a corporeal thing, certain particles in the brain are set in motion, sometimes by the action of external objects on the sense-organs, sometimes by animal spirits [see Glossary] that have risen from the heart to the brain, and sometimes by the mind's own action when it is impelled of its own free will to a certain thought. The motion of these brain particles leaves the traces that memory depends on. Where purely intellectual things are concerned, memory in the strict sense is not involved: something comes to mind just as readily the first time as it does the second—unless, as often happens, they are associated with certain names, for then it is genuine memory because the names are corporeal. There are many other points to be noted on this topic but I can't explain them in detail here.

(3) . . . . [You teach that one should not believe anything unless one clearly sees that it is true. This would erase the distinctions between knowledge and belief, and between belief and faith.] In the passage you are referring to, I said 'when we are supernaturally illumined by God, we are confident that what is put forward for us to believe has been revealed by God himself'; but there I was speaking not of human knowledge, but of faith. And I didn't assert that by the light of grace we clearly know the very mysteries of faith—though I would not deny that this too may happen—but only that we are confident that they



are to be believed. No-one who really has the Catholic faith can doubt or be surprised that it is most evident that what God has revealed is to be believed and that the light of grace is to be preferred to the light of nature. . . .

(4) Your fourth objection rests on something I nowhere say, namely ‘that the highest point of my certainty is when we think we see something so clearly that the more we think about it, the truer it seems’. So there is no need for me to answer what follows; though an answer could easily be given by anyone who sees that the light of faith is different from and preferable to the natural light.

(5) [‘You say that *you are a thinking thing*, but you aren’t entitled to think you can make sense of that. You can’t understand a proposition without understanding its subject or predicate; and you *don’t* know what is meant by “thing”, by “exist”, or by “thought”. If you did, you would explain those terms so clearly that I too would clearly perceive the truth of that proposition.’] I flatly deny that we don’t know what a thing is, or what thought is, or that I need to teach people this. It is so self-evident that there is nothing that could serve to make it any clearer. . . .

(6) It’s quite true that we don’t understand the infinite by the negation of limitation; and this argument [which Hyperaspistes said Descartes was committed to]—

- Limitation involves the negation of infinity, therefore
- the negation of limitation involves knowledge of the infinite

—is invalid. What makes the infinite different from the finite is something real and positive; but the limitation that makes the finite different from the infinite is •non-being or •the negation of being; and that-which-is-not can’t bring us to knowledge of that-which-is; on the contrary, •the negation of a thing has to be grasped on the basis of knowledge of •the thing itself. When I said that to understand the infinite all we need is to understand a thing that isn’t bounded by

any limits, I was following a very common usage. Similarly, when I kept the term ‘infinite’ rather than ‘greatest being’, which would more closely fit the reality, I was conforming to common usage which required me to use the negation of a negation. . . .

[‘You say that the mind’s power of amplifying perfections must have come from God; but couldn’t it come from instead the mind itself, as an eternal and independent substance?’] I didn’t deny that the mind has a power of amplifying the idea of things; but I kept insisting that neither •the ideas thus amplified nor •the power of so amplifying them could be in the mind unless the mind itself came from God, who really does have all the perfections that can be reached by such amplification. I proved this from the principle that there can be nothing in an effect that wasn’t previously in the cause. And no subtle philosopher in this field thinks that atoms exist of themselves, for it is obvious by the natural light that there can be only one being—the supreme being—that is independent of everything else.

[‘You say that a spinning top is an example of something’s acting on itself. I object. What acted on it was the whip.’] When you say that a spinning top doesn’t act on itself but is acted upon by the absent whip, I wonder how one body can be acted on by another that is absent, and how activity and passivity are to be distinguished. For I admit that I’m not subtle enough to grasp how something can be acted upon by something else that isn’t present—indeed by something that doesn’t exist any more (the whip could be destroyed while the top is still turning). And I don’t see why we couldn’t as well say that there are now no *actions* in the world but only *passive effects* of the actions that happened when the world began. I have always thought that a single event is called an •activity in relation to where it is heading, and a •passivity in relation to where it came from. If that is right, it is

contradictory—logically impossible—that there should be a passivity without an activity for even a single moment. Finally, I agree that the ideas of corporeal things—indeed of everything in the whole visible world, though not (as you say in your objection) of the visible world itself—could be produced by the human mind; but it doesn't follow that we cannot know whether there is anything corporeal in nature. Difficulties about this are produced not by my views but by wrong inferences from them. I proved the existence of material things not from •the fact that we have ideas of them but from •the fact that these ideas come to us in such a way as to make us aware that they aren't produced by ourselves but come from elsewhere.

(7) [You say that created things couldn't be kept in existence without a continuous action of God, just as light would fail if the sun stopped shining. But phosphorescent substances like Bologna spar could shine in a closed room, i.e. with no input from the sun.] I say first that in Bologna spar the light of the sun is not preserved, but the sun's rays kindle a new light that can afterwards be seen in the dark. Secondly, even if the objection involving Bologna spar were correct, it wouldn't follow that anything can be kept in existence without God's influence; this would merely be a case where something true was illustrated by a bad example. It is *much* more certain that •nothing can exist without being kept in existence by God than •that there can be no sunlight without the sun. There's just no doubt about this:

If God withdrew his continuing support for things' continued existence, everything that he has created would immediately go out of existence;

because these things were nothing until God created them and gave them his continuing support. This does not mean that they shouldn't be called 'substances', because when we call a created **substance** 'self-subsistent' we aren't ruling

out God's support, which it needs in order to subsist. All we mean is that it's the kind of thing that can exist without any other created thing; and that is not true of the **modes** of things, like shape and number. It's not the case that God would be showing the infinitude of his power if he made things that could exist without him later on; on the contrary, this would show his power to be finite, since created things, once they were in existence, would have no further need of him. I agree that it is impossible that God should destroy *anything* except by withdrawing his support; if he destroyed something in some other way he would be engaging in a positive activity tending towards non-being. . . . There's a great difference between what happens by God's positive activity and what results from the cessation of his positive activity: the former can't be anything but excellent, while the latter includes evils and sins and any destruction of beings that occurs.

[You hold that God freely created the eternal truths, i.e. *made* them be true. But let God do whatever he can; let us suppose *per impossibile* that he never thought of a triangle, if you were in the world as you now are wouldn't you agree that the three angles of a triangle equal two right angles?'] There is no force in what you say about the nature of a triangle. As I have insisted in several places, when •God or •the infinite is in question, what we must consider is not

- what we can comprehend—intellectually embrace, get our minds around—because we know that we can't do that with God or infinity, but only
- what we can conceive regarding them, i.e. what we can learn about them by arguments that are certain.

To find what kind of causal dependence these truths have on God, see my replies to the Sixth Objections, article 8.

(8) I don't remember ever having written, or even thought, that an infinite series of subordinate causes is impossible. •So I have nothing to reply to here•.

(9) [‘What makes you so certain that you have the idea of God? Others deny that they have such an idea; and you can’t be sure that you will always think as you do now.’] I don’t remember that I ever expressed surprise ‘that not everybody is aware of the idea of God in himself’; for I have often observed that what men •judge doesn’t square with what they •understand. I don’t doubt that everyone has within himself an implicit idea of God, i.e. a disposition to have it consciously in his mind; but I’m not surprised that not everyone is aware that he has it or notices that he has it. Some people might not notice it even after reading my *Meditations* a thousand times. In the same way, people •judge that so-called empty space is nothing, and yet they •conceive it as a positive thing. Similarly, when people think that accidents are real [see Glossary] they’re representing them to themselves as substances, even though they don’t judge them to be substances; and in many other matters people’s judgements disagree with their perception. But if we never make any judgement except about things we clearly and distinctly perceive—a rule that I always keep as well as I can—then we’ll be incapable of making different judgements at different times about the same thing. It’s true that things that are clear and beyond doubt appear more certain to us the more often and the more attentively we think of them; but I don’t remember that I ever put this forward as the criterion of clear and indubitable certainty. I don’t know where the word ‘always’ occurs in the way mentioned here; but I do know that when we say we ‘always’ do something we usually mean that we do it whenever the occasion presents itself, not that we do it eternally!

(10) [‘You deny that we can know God’s purposes as easily as we can know other causes. But it’s perfectly clear that what God aims at is that everything that happens should contribute to his glory.’] It is self-evident that we can’t know God’s purposes unless God reveals them. From the human point of view adopted in

ethics, it’s true that everything was made for God’s glory, meaning that we must praise God for all his works; and it’s true that the sun was made to give us light, meaning that we see that the sun does give us light. But it would be childish and absurd for a metaphysician to say that God, like some vainglorious human being, made the universe solely in order to win men’s praise; or that the sun, which is many times larger than the earth, was created solely in order to give light to man, who occupies a very small part of the earth.

(11) [In this paragraph, italics are used for ‘will’ as a verb, not as a noun.] [Hyperaspistes makes some hard-to-translate remarks about intellect and will, leading Descartes to respond:] There’s a confusion here between the functions of the intellect and of the will. The function of the will is not to understand but only to *will*; and though (as I agreed earlier) we never *will* anything that we don’t in some way understand, experience shows clearly that about any given thing our will can extend further than our knowledge. Again, falsehood is never apprehended as truth. Those who deny that we have an idea of God may

- affirm this,
  - believe it, and
  - argue for it,
- but they don’t really
- apprehend it.

As I remarked in (9) above, people’s judgements often don’t square with their perception or apprehension.

(12) [‘You say that a child can have the idea of a triangle before ever seeing one. This puts you on a collision path with Aristotle’s dictum that there’s nothing in the intellect that wasn’t first in the senses.’] I don’t have to do work hard on any answer to this, because nothing is objected against me except the authority of Aristotle and his followers; and I make no secret of the fact that I trust him less than I trust reason.

[‘Has anyone born blind ever perceived anything of light and colour? Of course not, as our three hundred blind men in Paris will testify, including a philosopher who, when I asked him, said he could not conceive of colour or light.’] It does not matter whether a man born blind has the ideas of colours or not, and it is pointless to cite the testimony of a blind philosopher. Suppose he has ideas *exactly* like our ideas of colours: he can’t know that they are like ours, or that they are called ideas of colours, because he doesn’t know what ours are like.

[‘If you were right in saying that the senses are a hindrance rather than a help to the intellect, we should be able to perform great intellectual feats in our sleep.’] It’s not surprising that in sleep the mind doesn’t construct demonstrations like those of Archimedes, because even in sleep it is still united to the body and is no freer than during waking life. Staying awake for a long time doesn’t make the brain more fit to retain the traces impressed on it. In sleep and waking life alike, traces are better retained the more strongly they are impressed. And so sometimes we remember even dreams, but we remember better what we have thought in waking life. The reasons for this will be clear in my *Principles of Philosophy*.

**(13)** [‘You say that God’s essence can’t be thought without including existence, in the way a triangle can be thought about without thinking of it as existent, the reason being that God is his own existence. What is this “his existence”? And are we to say that a triangle is not its own existence but the existence of something else?’] When I said that God is his own existence, I was using the regular theological idiom, which means that it belongs to God’s essence to exist. The same can’t be said of a triangle, whose whole essence can be correctly understood even if it is supposed that in reality there is no such thing.

[‘You say that the sceptic couldn’t doubt the truths of geometry if he acknowledged the existence of God.’ (And Hyperaspistes goes on at some length to question this.)] I said that the sceptics wouldn’t

have doubted the truths of geometry if they had recognised God, because: since those geometrical truths are very clear, the sceptics would have had no occasion to doubt them if they had known that *whatever is clearly understood is true*. We learn this last proposition from having a sufficient acquaintance with God, and that’s the premise that the sceptics don’t have ready at hand.

[‘Is a line made up of an infinity of sizeless points or rather a finite number of segments? Either answer leads to absurdity; so scepticism about geometry can have a basis that has nothing to do with God.’] That question is irrelevant and need not be answered here. In the place cited, I wasn’t talking about •any and every geometrical topic but only about •demonstrations that the sceptics doubted even though they clearly understood them. You can’t have a sceptic saying ‘Let the evil demon deceive me as much as he can, he will never deceive me about this geometrical proposition’, because anyone who says this doesn’t doubt everything, which means that he isn’t a sceptic. Certainly I have never denied that the sceptics themselves, as long as they clearly perceive some truth, spontaneously assent to it. It is only in name, and perhaps in intention and resolve, that they adhere to their heresy of doubting everything. But I was dealing only with things that we remember having clearly perceived earlier, not with those that we clearly perceive at the present moment. . . .

**(14)** [‘You deny that the mind is extended, yet you say that it is unified with the body. How can this be?’] A mind can be co-extensive with an extended body even though it has itself no real extension in the sense of occupying a place and excluding other things from it. I explained how this can be by the illustration of heaviness conceived as a real quality. I also showed above that when Ecclesiastes says that man has no advantage over a beast of burden, he is speaking only of the body; for he goes straight on to deal separately with the

soul—‘Who knows if the spirit of the sons of Adam. . . ,’ and so on.

[The opening of the final paragraph is too condensed to be easily followed. The core of it is as follows. Suppose that

- (i) We can’t conceive the mind without the body; and
- (ii) We can conceive the mind as a complete thing apart from the body (and vice versa).

Of these, (ii) counts in favour of Descartes’s view of mind and body as distinct substances, whereas (i) seems to count against it. Hyperaspistes has asked which of the above two supposed facts shows us in a worse light, displaying •a weakness in our thinking rather than •a metaphysical truth. Descartes’s answer is that (ii) comes from a positive faculty that we have, whereas (i) comes from our lacking that same faculty:] It is through a real faculty of the mind that it (ii) perceives two things separately as complete things; and it’s through a lack of the same faculty that the mind (i) apprehends these two things merely in a confused manner, as a single thing. In the same way, eyesight is more perfect when it accurately distinguishes the different parts of an object from one another than when it perceives them all together as a single thing. Of course someone whose eyes are unsteady may mistake one thing for two, as people often do when drunk; and philosophers do the same. . . .when they distinguish a body’s •matter from its •form and various accidents, as though these were so many different *things*. In such cases their perception is obscure and confused in a way that makes it easy for them to realise that it arises not only from a positive faculty but also from a defect of some faculty; if they had attended more carefully they’d have realised that they don’t have completely different ideas of the things they are supposing to be distinct from one another. . . .

#### to Mersenne, ix.1641:

I’m much in your debt for all the trouble you have taken for my sake, and for your zeal in locating and passing along anything that concerns me. But since I don’t care about that as much as you do, I would be guilty of an injustice if I didn’t beg you to ignore completely whatever you may hear against me—don’t write to me about it or even bother to listen to it. I have long known that there are fools abroad in the world, and I care so little about what *they* think that I would be extremely sorry to lose a single moment of my free time or my peace and quiet on their account.

As for my *Metaphysics* [the *Meditations*], I haven’t given it a thought since the day I sent you my answer to Hyperaspistes—I haven’t even picked up the work since then. So I can’t answer a single one of the queries you sent me in your letter last week—I merely beg you not to give them any more thought than I do. In publishing the book I did what I thought I had to for the glory of God and to satisfy my conscience. If my project has failed, and there are too few people in the world capable of understanding my arguments, that’s not my fault and doesn’t make my arguments less sound. But it *would* be my fault if I became angry, or used up more time answering the irrelevant objections of those who have been in touch with you.

[A paragraph about the recently deceased Beaugrand, some of whose anti-Descartes mathematical pieces Mersenne has forwarded to Descartes. Don’t send any more, Descartes says, because we already have plenty of scrap paper, which is all they are good for.]

I beg you once more not to send me any more objections against my *Metaphysics*, or regarding my *Geometry* or similar matters, or at least don’t expect me to compose any more replies addressed to people who aren’t able to learn.

⊕ [ix.41: Descartes writes to Regius, two short letters urging Regius to be more gentle in his replies to Sylvius’s criticisms of what he has written about the circulation of blood.]

**to Mersenne, 17.xi.1641:**

I must tell you that my *Meditations* are being printed in this country. A friend had told me that several firms wanted to publish them, and that I couldn’t stop it because Soli’s licence to publish is valid only for France; even if he did have a licence for Netherlands, that wouldn’t deter other publishers—that’s how uncontrolled they are in this country. So I preferred to have just one publisher who would undertake it with my approval and my corrections, and who by announcing the project would stop the plans of others, rather than letting an edition come out without my knowledge and thus inevitably full of mistakes. So I’m having it printed by one of the Elzevirs in Amsterdam, on condition that he doesn’t infringe on Solti’s rights by sending copies to France. Not that I have reason to be satisfied with Soli: the book was printed three months ago, and he still hasn’t sent me any copies. [The complaints against Soli continue, and then:]

I have a few questions for you. Do you think it appropriate that I should restore the cuts you made from the end of my reply to Arnauld regarding the Eucharist? Should I include the objections of Hyperaspistes with my reply? Also, should I put under the title ‘Second Edition, with corrections and additions to the first edition published in Paris’? The new edition won’t be ready for two months, and if the 100 copies that you told me Soli would be sending are already on their way, they can easily be sold during that time; if they aren’t on their way, he can keep them if he wishes.

[Descartes now asks to be sent a plan of the gardens of Luxembourg, for ‘a close friend’ of his [presumably Huygens];

asks for the plans to be done by ‘the young man [Schooten] who did the diagrams for my *Optics*’; and says he is willing to pay up to eight pistoles for this, if it can’t be done for less. He then winds up with brief remarks on some vaguely scientific matters raised in Mersenne’s recent letters.]

**to Regius, xii.1641:**

I have received your theses, and I thank you; I find nothing in them that I don’t agree with. What you say about actions and passions [see Glossary] presents no difficulty, I think, provided the terms are understood correctly. In corporeal things, all actions and passions consist simply in motion; we call it ‘action’ in relation to the body that supplies the motion and ‘passion’ in relation to the body that is moved. It follows from this that when we want to extend these terms to immaterial things we have to find something in them that is analogous to motion. So we should apply ‘action’ to what plays the role of a moving force, like *volition* in the mind, and apply ‘passion’ to what plays the role of something moved, like intellection and vision in the same mind. As for those who think that perception should be classified as ‘action’: they seem to be willing to call any real power ‘action’, and to use ‘passion’ to refer to the mere negation of a power. . . .

[The letter corrects some mistakes in Regius’s theses.]

⊕ [xii.41: In this same month Descartes writes two more (short) letters to Regius, one Latin and the other French, both dealing with medical matters. Then still in the same month:].

**to Regius, xii.1641:**

[Regius had recently defended a number of theses that gave offence to Voetius and other orthodox thinkers at the University of Utrecht.] In your theses you say that a human being is an *ens per*

*accidens* [see Glossary]. You could scarcely have said anything more objectionable and provocative. The best way I can see to remedy this is for you to say that in your thesis 9 you were thinking about •the whole human being in relation to the parts of which it is composed, while in 10 you were concerned with •the parts in relation to the whole. Say too that when in 9 you said that a human being comes into being *per accidens* out of a body and a soul, your point was to indicate that it is *in a way* accidental for a body to be joined to a soul and vice versa, because the body can exist without the soul and the soul without the body. For the term ‘accident’ means anything that can be absent without its possessor ceasing to exist; . . . Tell them that in spite of this you didn’t say that •a human being is an *ens per accidens*, and you showed sufficiently in thesis 10 that you understood •it to be an *ens per se* [see Glossary]. You said there that the body and the soul, in relation to the whole human being, are incomplete substances; and it follows from their being incomplete that what they constitute is an *ens per se*. It’s possible for something to come into existence *per accidens* yet be an *ens per se*; you can see this in the fact that mice are generated (i.e. come into being) *per accidens* from dirt, and yet they are *entia per se*. It may be objected that

‘It’s the very nature of a human body to be joined to a soul; it’s not “accidental”. If a body has all the dispositions required to receive a soul (which it must have to be strictly a human body), then it would take a miracle for it *not* to be united to a soul. Furthermore, what is accidental to the soul is not its being joined to the body but only its being separated from it after death.’

You shouldn’t outright deny this, for fear of giving further offence to the theologians; but you should reply that these things can still be called accidental, because when we con-

sider the body alone we perceive nothing in it demanding union with the soul, and nothing in the soul obliging it to be united to the body; which is why I said above that it is accidental *in a way*, not that it is *absolutely* accidental.

[The letter ends with •an obscure paragraph about the difference between alteration and generation, •advice on how to handle a colleague, and •a note about a missing word. Then:] I have nothing to say about the rest. There’s hardly anything here that you haven’t put forward elsewhere; that’s something I am glad to see, because the project of always coming up with something new would be laborious.

If you come here, I will always be pleased to see you.

⊕ [22.xii.41: Descartes writes to Mersenne in Latin, a letter protesting the Jesuits’ taking seriously Bourdin’s attacks on Descartes’s work, and responding to some of the attacks. Each of its eight paragraphs begins *Miror. . .* = ‘I am surprised. . .’.]

⊕ [22.xii.41: Descartes writes another letter to Mersenne, this time in French, asking for his help in keeping out of any trouble that Regius and his friends may be stirring up, and saying that he had dropped his plan of launching a critical attack on scholastic philosophy because ‘it is so clearly and absolutely refuted simply by the establishment of my philosophy’. He expresses his hope that his Latin letter of this date will be shown to Dinet, who is Bourdin’s superior in the Society of Jesus = the Jesuits.]

### to Gibieuf, 19.i.1642:

[The letter opens with a strenuous expression of pleasure in Gibieuf’s understanding of what Descartes was up to in the *Meditations*, and of hope that eventually there may be more acceptance of his philosophy in the learned world. Then:] I have never aimed to get the approval of the learned as a body. I have known for years—and said so—that my views wouldn’t be to the taste of the multitude, and that they

would be readily condemned in any context where a majority held sway. And I haven't wanted the approval of individuals either, because I would be sorry if anyone did anything on my account that his colleagues might dislike; and also because books that are no less heretical than mine have generally gained approval so easily that I don't think I would have anything to fear from a judicial inquiry into whether I am a heretic. [What Descartes wrote means 'more heretical' rather than 'less heretical', but that was obviously a slip.] But this didn't stop me offering my *Meditations* to your Faculty for thorough scrutiny; for if such a celebrated body could not find any good reason to criticise the work, this would give me further assurance of the truths it contained.

You ask what principle is guiding me when I seem to know that some idea of mine is 'not made inadequate by an abstraction of my intellect'. I derive this principle purely from my own thought or awareness. I am certain that all my knowledge of what is outside me comes through ideas I have within me; so I take great care not to relate my judgements immediately to *things*, and not to attribute to them anything positive that I don't first perceive in the ideas of them. But I think also that whatever is in these ideas must also be in the things themselves. So, to tell whether an idea of mine has been made incomplete or inadequate by an abstraction of my mind, I merely look to see whether I have derived it, not from •some thing outside myself, but by an intellectual abstraction from •some other, richer or more complete idea that I have in myself. This intellectual abstraction consists in my turning my thought away from one part of the contents of this richer idea the better to apply it to the other part with greater attention. Thus, when I consider a •shape without thinking of the •substance or the •extension whose shape it is, I make a mental abstraction. I can easily recognise this abstraction afterwards when I look to see whether I have

derived this idea of the shape on its own from some other, richer idea which I also have within myself, to which it is joined in such a way that although one can think of the one without paying any attention to the other, it is impossible to deny one of the other when one thinks of both together. For I see clearly that the idea of the shape in question is joined in this way to the idea of the corresponding extension and substance, because we can't conceive a shape while denying that it has an extension, or to conceive an extension while denying that it is the extension of a substance. But the idea of a substance with extension and shape is a complete idea, because I can conceive it entirely on its own and deny of it everything else that I have an idea of. Now it seems to me very clear that •my idea of a thinking substance is complete in this sense, and that •I don't have any other idea that is prior to it and joined to it in such a way that I can't think of the two together while denying the one of the other; for if I had any such idea I would have to know it. You may say:

The difficulty is still there, because although you conceive the soul and the body as two substances that you can conceive separately, and can even deny of one another, you still aren't certain that they are such as you conceive them to be.

But remember the rule already stated, that *we can't have any knowledge of things except by the ideas we conceive of them*; so that we mustn't judge of them except in accordance with these ideas, and we must even think that whatever conflicts with these ideas is absolutely impossible and involves a contradiction. Thus our only reason to affirm that *there's no uphill without a downhill* is that we see that the ideas of these things can't be complete when we consider them apart—though of course by abstraction we can obtain the idea of an upward slope without considering that the same slope can be travelled downhill.



In the same way we can say that the existence of atoms—material things that are extended but indivisible—involves a contradiction, because you can't have the idea of an extended thing without also having the idea of half of it, or a third of it, and so conceiving it as being divisible into two or three parts. From the simple fact that I consider the two halves of a part of matter, however small it may be, as two complete substances *the ideas of which are not made inadequate by an abstraction of my intellect* I conclude with certainty that it really is divisible. You may say:

Though you can conceive them apart, you have no reason to deny their inseparability because for all you know God may have united or joined them together so tightly that they are entirely inseparable.

I reply that however he may have joined them, I'm sure that he can also disjoin them; so that absolutely speaking I have reason to call them separable, because he has given me the power to conceive them as such. I say the same about the soul and the body and in general all the things of which we have different complete ideas—namely their being inseparable involves a contradiction. But I don't deny that the soul and the body may have many properties of which I have no ideas; I deny only that they have any properties that are inconsistent with the ideas of them that I do have, including the idea that I have of their distinctness from one another; for otherwise God would be a deceiver and we would have no rule to make us certain of the truth.

I believe that

•the soul is always thinking

for the same reason that I believe that

•light is always shining,

even when there are no eyes to see it, and that

•heat is always warm,

even when no-one is being warmed by it, and that

•body, i.e. extended substance, always has extension, and in general that whatever constitutes the nature of a thing *always* belongs to it, as long as it exists. If you told me that a certain soul •ceased to think at a certain time, I would find it easier to believe that it had •ceased to exist than that it •continued to exist but without thinking. There's no difficulty here except for someone who thinks it *superfluous* to believe that the soul thinks at times when no memory of the thought remains. But think about it: every night we have a thousand thoughts (and while awake we have a thousand thoughts an hour) of which no trace remains in our memory; and these thoughts seem no more useful—no less 'superfluous'—than thoughts we may have had before we were born. That should help you to find my view more convincing than the thesis that a substance whose nature is to think can exist while not thinking at all.

I don't see any difficulty in understanding •that the faculties of imagination and sensation belong to the soul, because they are species of thoughts, and yet that •they belong to the soul only in so far as it is joined to the body, because we can conceive the soul in all its purity without bringing in thoughts of those kinds.

We see animals moving in ways that we move because of our imaginations and sensations, but that doesn't mean that we see that they have imaginations and sensations. On the contrary, these same movements can be made without imagination, and we have arguments to prove that that's what happens in animals, as I hope to show clearly by describing in detail the structure of their limbs and the causes of their movements.

But I fear I have already wearied you by writing at such length. I will count myself very happy if you continue to honour me with your kindness and grant me the favour of your protection.

**to Mersenne, 19.i.1642:**

As for the Jesuits, I still see no signs of straightforwardness, openness, on their part. The writings of Bourdin that have reached me show that they're only looking for indirect ways to oppose me; and as long as they act against me only through him, I won't believe they want peace and I'll feel free to go public with the facts about what is going on between them and me. You can assure them that I have no plans to write against them—i.e. to use insults and slanders to try to discredit them, as Bourdin has done against me; but please *don't* tell them that I won't be taking one of their textbooks on philosophy so as to point out its errors; on the contrary, I would like them to know that I *will* do so if I judge that that would contribute to making the truth known. They shouldn't take this amiss if they prefer the truth to the vanity of wanting to be thought wiser than they are. But I shan't decide what to do about their objections until I see them. . . .

[Five paragraphs concerning •an aspect of the physics of collisions, •Descartes's refusal to tackle any of Roberval's puzzles in geometry, •a critic's reasonable request for more help with the physics of subtle matter, •a point in optics, and •the weather (cold and snowy). Then:

I have recently found a successful way to weigh air. I took a small very light glass phial with a long spout that had an extremely small hole at the end. The weight of this, when cold, was 78.5 grains. I then heated it over a coal fire, and replacing it on the balance with the spout pointing downwards I found that it weighed just under 78 grains. I then immersed the spout in water and let it cool; as it cooled the air condensed, so that a quantity of water entered the opening spout that was equal to the quantity of air previously expelled by the heating process. Finally, I weighed the phial,

including the water it now contained, and found that it weighed 72.5 grains more than it did before. I conclude from this that the weight of the air expelled by the heat stands in relation to the water that took its place in the ratio  $\frac{1}{2}$  to  $72\frac{1}{2}$ , or 1 to 145. My calculation could be wrong, since it's very difficult to be exact, but I'm sure that the weight of air is detectable in this way, and I have described my procedure at length so that you can repeat it if you are interested in doing the experiment. . . .

⊕ [i.42: Descartes writes to Regius urging that they get together to decide how best to counter the attacks of their intellectual enemies. He thinks it best just to laugh at them, but if Regius wants to go further he will have Descartes's support.]

**to Regius, i.1642:**

[Relevant background facts: Voetius, now Rector of the University of Utrecht, tried and failed to have Regius removed from his Chair; and his partisans publicly attacked Regius's theses •that a human being is an *ens per accidens*, •that the earth moves around the sun, and •that substantial forms are to be rejected.] I have had here all afternoon a distinguished visitor, M. Pollot, who discussed the Utrecht affair with me at length in a friendly and prudent manner. I agree with him entirely that you should refrain from public disputations for some time, and should be careful not to annoy people by harsh words. I would like it best if you never put forward any new opinions, but retained all the old ones in name, and merely brought forward new arguments. No-one could object to this, but those who understood your arguments would work out for themselves what you want them to understand. For instance, what need was there for you to *openly* reject substantial forms and real qualities? Don't you remember that in my *Meteorology* I said explicitly that I *didn't* reject or deny them, but simply found them

unnecessary in setting out my explanations? If you had taken this course, all your audience would have rejected them when they saw they were useless, and in the meantime you wouldn't have been so unpopular with your colleagues.

But what is done can't be undone. Now you must try to defend as moderately as possible the truths you have put forward, and not to be obstinate about correcting any errors or inaccuracies that you are guilty of. Remind yourself that there is nothing more praiseworthy in a philosopher than a candid acknowledgement of his errors. For instance, when you said that a human being is an *ens per accidens* I know that you meant only what everyone else admits, that a human being is made up of two things that are really distinct. But that's not how the scholastics use the expression *ens per accidens*; so if you can't use the explanation I suggested in a previous letter (and I see that in your latest paper you have departed from it somewhat, and let your ship drift onto the rocks), then •openly admitting that you misunderstood this scholastic expression is better than •trying and failing to cover the matter up. You should say that you agree with the others except in the wording you choose. And whenever the occasion arises, in public and in private, you should say openly that you believe that a human being is a true *ens per se*, and not an *ens per accidens*, and that the mind is united in a real and substantial manner to the body. You must say that they are united not by •position or disposition, as you assert in your last paper—for this too is open to objection and is, in my opinion, quite untrue—but by •a true mode of union. Everyone agrees about this, though nobody explains what the mode of union *is*, so you don't need to either. Still, you *could* explain it as I did in my sixth Meditation, by saying that we perceive that sensations such as pain are not pure thoughts of a mind distinct from a body, but confused perceptions of a mind really united to a body. If

an angel were in a human body, he wouldn't have sensations as we do, but would simply perceive the motions that are caused by external objects, and in this way would differ from a real man.

As regards your •latest• writing: although I don't have a firm grasp of what you mean to be saying in it, it seems to me (to speak candidly) that it won't serve your purposes and is out of tune with the times. In it you say many things that are hard to swallow, and you don't clearly set out the reasons that would enable you to defend the good cause. One gets the impression that grief or indignation have driven you into a state of depression. It would be much harder for me to •comment separately on each item in your document than to •sketch a model •of how I think you should proceed•, so the latter is what I shall do; and although I am swamped in other duties I'll give a complete day or two to this task. I hope you'll excuse my freedom in speaking my mind.

I think it would be worth your while to answer Voetius's appendix in an open letter; for if you ignored it, your enemies could crow over your supposed defeat. But you should reply so gently and modestly as to offend no-one—yet so firmly that Voetius realises he is beaten by your arguments, and pulls out of the contest so as to avoid a further defeat. I will now sketch the reply I would think I should make if were in your position. I will write partly in French and partly in Latin, depending on which phrases come to mind more easily. . . .

[There follows a long piece of advice about tone and wording: ways of expressing respect for Voetius; flattered pleasure over the fact that the Rector of the University has concerned himself particularly with the department of medicine, and so on. The aim must be to have a calm, civilised confrontation of views and reasons, not dominated by a passionate desire to *win* and not tempting students to get into the act and turn it into a shouting-match. Then Descartes presents a

12-page document against Voetius, suggesting that Regius might use it after first changing its style to something that reads like him rather than Descartes. A few small portions of that material will be presented here. Descartes sometimes has Regius saying ‘we’ and ‘our’; there seems to be no good reason for this, and in the present version the first-person singular is used all the way.]

‘I readily admit that since I employ only arguments that are very evident and intelligible to people who have no more than common sense, I don’t need many foreign terms to make them understood. It thus takes very little time for a reader to learn the truths I teach, and find that his mind is satisfied on all the principal difficulties of philosophy—much less time than he would need to learn all the terms that others use to explain their views on the same problems. And even with all that, those others never manage to produce this kind of satisfaction in minds that make use of their own natural powers of reasoning; they merely fill them with doubts and mists. . . .

‘I fully agree with the learned Rector that those “harmless entities” called *substantial forms* and *real qualities* should not be rashly expelled from their ancient territory. And I haven’t outright rejected them; I merely say that they aren’t needed in explaining the causes of natural things; and I think it’s a positive merit in my arguments that they don’t depend at all on uncertain and obscure notions of that sort. Now in matters like this, saying “I’m not willing to use these ‘supposed’ entities” is very close to saying “I do not accept them”, because the only reason anyone accepts them is the belief that the causes of natural effects can’t be explained without them. So, all right, I confess that I do wholly reject them. . . .

‘Voetius asks “Can the denial of substantial forms be reconciled with Holy Scripture?” Well, these philosophical

entities are unknown outside the Schools [see Glossary], and never crossed the minds of the prophets, apostles and so on who composed the sacred Scriptures at the dictation of the Holy Ghost. No-one who knows this much will need to ask that question. To prevent any ambiguity, please note that when I deny “substantial forms” I am using that phrase to refer to

a certain substance joined to matter, making up with it a merely corporeal whole, which is a true substance or self-subsistent thing.

It deserves that status even more than matter does, because it is called an actuality and matter only a potentiality. I don’t think you’ll find anywhere in Holy Scripture any mention of such a substance or substantial form, present in purely corporeal things but distinct from matter. . . .

‘He fears that if we deny substantial forms in purely material things, we may also doubt whether there is a substantial form in man, and may thus be in a less happy and secure position than the adherents of forms when it comes to silencing the errors of those who imagine there is a universal world-soul, or something similar. It can be said in reply to this that on the contrary the easiest slide down to the opinion that the human soul is corporeal and mortal is provided by the view that there are substantial forms—a slide down to there but also a blocker. If the soul is recognised as merely a substantial form, while other such forms consist in the configuration and motion of parts, this very privileged status it has compared with other forms shows that its nature is quite different from theirs; and this difference in nature opens the easiest route to demonstrating that the soul is immaterial and immortal, as can be seen in the recently published *Meditations on First Philosophy*. Thus one can’t think of any opinion on this subject that is more congenial to theology.’

[Then a dense and difficult paragraph in which Descartes, like a juggler, has in the air all at once •substantial forms, •real qualities [see Glossary], •principles [see Glossary] of actions, •physical structures, and •states of faith.]

‘All the arguments to prove substantial forms could be applied to the form of a clock, which nobody says is a substantial form.

‘The arguments or physical proofs that would (I think) force a truth-loving mind to abandon substantial forms are mainly the following two *a priori* metaphysical or theological ones. It is inconceivable that a substance should come into existence in any way other than being created by God; but we see that so-called “substantial forms” come into existence all the time; yet the people who think they are substances don’t believe that they’re created by God; so their view is mistaken. This is confirmed by the example of the soul, which is the true substantial form of man. The only reason why the soul is thought to be immediately created by God is that it is a substance. Hence, since the other “forms” are not thought to be created in this way, but merely to emerge from the potentiality of matter, they shouldn’t be regarded as substances. It is clear from this that it is not those who deny substantial forms but those who affirm them who “can be forced by solid arguments to become either beasts or atheists”. . . .

‘The second proof is drawn from the purpose or use of substantial forms. They were introduced by philosophers solely to account for how natural things behave—they were supposed to be the principles and bases for the behaviour. But no natural action can be explained by these substantial forms, because their defenders admit that they are “occult” and that they themselves don’t understand them. Their saying that some action proceeds from a substantial form amounts to saying that it proceeds from something they

don’t understand—which doesn’t explain anything! So these forms are not to be introduced to explain the causes of natural actions. Essential forms explained in my fashion, on the other hand, give manifest and mathematical reasons for natural actions, as can be seen with regard to the form of common salt in *Meteorology*.’ And at this point you can bring in what you say about the movement of the heart,

‘I affirm that human beings are made up of body and soul, not by the mere presence or proximity of one to the other, but by a true substantial union. (This does naturally require the body to have an appropriate positioning and arrangement of the various parts; but the union doesn’t consist in mere positions and shapes—mere *inter-locking*—because it involves not only the body but also the soul, which is incorporeal.) The idiom I used is perhaps unusual, but I think it is not a bad way of getting across my meaning. When I said that a human being is an *ens per accidens*, I meant this only in relation to its parts, the soul and the body; I meant that for each of these parts it is *in a way* accidental for it to be joined to the other, because each can subsist apart, and that’s what we all mean by “accident”—something that can be present or absent without the subject ceasing to exist. But if a human being is considered in himself as a whole, we say of course that he is a single *ens per se* and not *per accidens*; because the union joining a human body to a soul is not accidental but *essential* to the human being, because without it he wouldn’t be a human being. But of the two mistakes that can be made in this area—

- (i) thinking that the soul is not really distinct from the body,
- (ii) admitting that they are distinct while denying their substantial union,

—many more people are guilty of (i) than are guilty of (ii). Thus, to refute those who believe souls to be mortal it’s more

important to teach the distinctness of parts in a human being than to teach their union. So I thought I would please the theologians more by saying that a human being is an *ens per accidens* to make the distinction than by saying that he is an *ens per se* to emphasize the union of the parts.'

### to Huygens, 31.i.1642:

A few days ago I received the Jesuits' paper [the seventh set of objections, by Bourdin]. It is now a prisoner in my hands, and I want to treat it as courteously as I can; but I find it so guilty that I see no way of saving it. Every day I call my council of war about it, and I hope that before long I'll be able to show you the transcript of the trial.

Perhaps these scholastic wars will lead to my *World's* being brought into the world. It would be out already, I think, if it weren't that I want to teach it to speak Latin first. I shall call it *Summa Philosophiae*—echoing Aquinas's *Summa Theologica*—to ease its acceptance by the scholastics who are now persecuting it and trying to smother it before its birth. The Protestant ministers in Holland are as hostile as the Jesuits.

⊕ [2.ii.42 and 7.ii.42: Regius writes to Descartes two letters that we don't have, though we know their content. The first says that Regius had adopted an extremely moderate tone in writing against Voetius, and is surprised by Descartes's tone. He is sure that any response to Voetius would be badly received, and thinks that the mild manner recommended by Descartes would be read as mockery. When someone has risked his career in the defence of Descartes's philosophy, Regius says, it would be imprudent and unjust of Descartes to leave him dangling in the wind [not his phrase]. He adds three bits of anecdotal evidence that Voetius is plotting against him. The second letter reports that Regius's response to Voetius is about to be published, and that two copies of it will be sent to Descartes.]

[Regius's reply to Voetius was published on 16.ii.42. Voetius prevailed on the magistrates of Utrecht to order the work to be suppressed and to forbid Regius to teach anything but medicine.]

### to Regius, late ii.1642:

As far as I hear from my friends, everyone who has read your reply to Voetius praises it highly—and very many have read it. Everyone laughs at Voetius and says he has become desperate, as witness his calling on your magistrates to help in his defence. As for substantial forms: everyone is denouncing them, and it's being openly said that if all the rest of our philosophy were explained in the manner of your reply, everyone would embrace it. You shouldn't be upset that you are forbidden to lecture on physics; indeed, I would prefer it if you had been forbidden even to give private instruction on physics. All this will bring honour to you and shame to your adversaries. If I were one of your magistrates and wanted to destroy Voetius, I would act exactly as they are acting—and who knows what they have in mind? [Further words of encouragement, and advice to follow carefully the commands and advice of Van der Hoolck.]

⊕ [5.iii.42: Regius writes to Descartes, reporting on the various legal devices Voetius is resorting to in an attempt to block the publication of Regius's defence of Descartes's philosophy. He begs Descartes to use his influence with Van der Hoolck to 'turn aside this tempest that is threatening our philosophy and my person'.]

⊕ [iii.42: Descartes writes to Regius, six pages of Latin, offering congratulations on being one of those who suffer in the interests of the truth, and expressing firm confidence that eventually Regius and the truth will triumph.]

**to Mersenne, iii.1642:**

... On the matter of my bearing public witness to my being a Roman Catholic, it seems to me that I have already done so very explicitly several times, for example in the dedication of my *Meditations* to the gentlemen of the Sorbonne, in my explanation of how the forms remain in the substance of the bread in the Eucharist, and elsewhere. I hope that my residence in this country isn't going to give anyone grounds for thinking badly of my religion, seeing that this country is a refuge for Catholics—as witness the Queen who arrived here recently and the Queen who is said to be returning to here shortly. [That refers to Henrietta Maria, wife of Charles I of England and Scotland, and Marie de Medici, Queen Mother of France.]

I'm sending you the first three sheets of Bourdin's objections [the seventh set]. I can't yet send you the rest because of the publisher's negligence. Please keep the manuscript copy that you have, so that he can't say that I have changed anything in his copy, which I was careful to have printed as accurately as possible. You may be surprised that I accuse him of such duplicity; but there's worse to come, as you'll see. I have treated him as courteously as I possibly could, but I have never seen a paper so full of faults. I hope to keep his cause separate from that of his colleagues, so that they can't bear me any ill-will unless they want openly to declare themselves enemies of the truth and partisans of slander.

I have looked in St Augustine for the passages you mentioned about Psalm 14; but I can't find them, or anything about that Psalm. I have also ransacked the errors of Pelagius, to discover why people say that I share his opinions, about which I have known nothing until now. I'm surprised that those who want to slander me should seek such false and far-fetched pretexts. Pelagius said that it was possible without grace to do good works and merit eternal life, and

this was condemned by the Church; I say that it's possible to know by natural reason that God exists, but I don't say that this natural knowledge by itself, without grace, merits the supernatural glory we expect in heaven. On the contrary, it's evident that since this glory is supernatural, more than natural powers are needed to merit it. I have said nothing about the knowledge of God except what all the theologians also say. It should be noted that what is known by natural reason—that he is all-good, all-powerful, all-truthful, etc.—may well serve to prepare infidels to receive the Faith, but it isn't enough to enable them to reach heaven. For that it is necessary to believe in Jesus Christ and other revealed matters, and that belief depends upon grace.

I see that my writings are easy to misunderstand. Truth is indivisible, so the slightest thing that is added or taken away falsifies it. Thus, you quote as an axiom of mine: *Whatever we clearly conceive is or exists*. That's not my view. What I do hold is that whatever we perceive clearly is true, and so it

- does exist if we perceive that it can't *not* exist; and
- can exist if we perceive that its existence is possible.

For although the objective [see Glossary] being of an idea must have a real cause, it is not always necessary that this cause should contain it formally [see Glossary], but only eminently.

[A paragraph about the doctrine of transubstantiation. Mersenne had told Descartes that in 1418 Wycliffe was condemned by the Council of Constance for denying that doctrine. Descartes says that this doesn't touch him because... well, the reason he gives is obscure, but at the heart of it is this: the only negative thing he has said about transubstantiation is that it shouldn't be interpreted in terms of 'real accidents' [see Glossary] passing into or out of the sacramental bread and wine; and the Church's Councils have never taken any stand on real accidents. Then a final paragraph about the 'impudence' of Voetius.]

⊕ [iii.42: Descartes writes to Pollot about recent events at the University of Utrecht. He doesn't believe rumours that Regius has been fired, but he knows that the situation is bad: there's now a law that no philosophy but Aristotle's may be taught in the University. Descartes's friends should be careful not to write to him anything that couldn't be seen by everyone, and he will do the same. 'Above all, I beg you not to make enemies on my account; I am already too indebted to you without that.']

⊕ [31.iii.42: Regius writes to Descartes about events at the University of Utrecht.]

⊕ [iv.42: Descartes writes to Regius in reply, urging him to stay cheerful: his enemies at the University are making public fools of themselves; Regius can make them look even worse by dealing with any requests to explain his views by saying that his lips are 'sealed by university law', and before long he'll be restored to a properly free teaching position and a place of greater honour than he had before.]

⊕ [4.iv.42: Regius writes to Descartes: more of the same.]

### to Huygens, 26.iv.1642:

I have asked van Surck to present you with a copy of the Amsterdam edition of my *Meditations*. The book isn't worth your reading more than once, and I know that you have seen it already, but still I wouldn't be happy with myself if I failed to send you a copy. Also, this edition is more correct than the Paris one, and even a little larger, chiefly at the end of my reply to the Fourth Objections, where I let myself go so far to say that the common view of our theologians about the Eucharist is less orthodox than mine. This was a passage that Mersenne had cut out ·of the first edition· so as not to offend our learned doctors.

⊕ [26.v.42: Huygens writes to Descartes, wanting to interest him in trying to think up a good design for an inexpensive way of raising water, this being 'a matter of great importance in these Netherlands'.]

### to Regius, vi.1642:

I am delighted that my account of the Voetius affair has pleased your friends. [That was in a letter to Dinet, published along with the Objections (and Replies) to the *Meditations*.] I haven't seen anyone, even among the theologians, who doesn't seem to approve of the thrashing ·I gave him·. My account can scarcely be called too hard on him: everything I recorded is simple fact, and I wrote at much greater length against one of the Jesuit fathers [Bourdin].

I have briefly read what you sent me; it is all excellent and highly pertinent, except for the following few points.

First, in many places the style is not sufficiently polished.

Apart from that, where you say 'matter is not a natural body' I would add 'in the view of those who define "natural body" in this way'. For since we believe it is a true and complete substance, I don't see why *we* would deny that matter is a natural body.

You seem to imply that •living things are more unlike •lifeless things than •clocks or other automata are unlike •keys or swords or other non-self-moving appliances. I don't agree. But just as 'self-moving' is a genus that includes all machines that move of their own accord and excludes others that are not self-moving, so also 'life' can be taken as a genus that includes the forms of all living things.

[A paragraph on a minor point, and another advising a little more caution in how things are said. Then:]

As for the difficulty you raise concerning the idea of God, it's important to bear in mind that what's at issue here is not

(i) the essence of the idea considered only as a mode of the human mind, but

(ii) the idea's objective [see Glossary] perfection.

·There's nothing specially glorious about (i): it's a mode or state of a human being and is therefore· no more perfect



than a human being. But **(ii)** is indeed glorious—it's the perfection that the idea of God *represents*—and the principles of metaphysics teach us that this must be contained formally or eminently [see Glossary] in the cause of the idea. If someone said 'Anyone can paint pictures as well as Apelles, because they're only patterns of paint and anyone can make those', the right reply would be that when we talk about Apelles' pictures our topic is not a mere pattern of colours, but a pattern skillfully made to represent reality, such as can be produced only by those very practised in this art.

My reply to your second point is this. You agree that thought is an attribute (of a substance) that contains no extension, and conversely that extension is an attribute (of a substance) that contains no thought. [The parentheses are added so as to make sure that the 'which contains. . .' clause refers back to the attribute, not the substance.] So you must also agree that a thinking substance is distinct from an extended substance. Our only sign that one substance differs from another is that we understand one apart from the other; and this *does* show that they are two substances, not one; because God can surely bring about whatever we can clearly understand. The only things that are said to be impossible for God to do are ones that involve a conceptual contradiction, i.e. that are not intelligible. But we can clearly understand a thinking substance that isn't extended, and an extended substance that doesn't think, as you agree. So however strongly God conjoins and unites them, it's not possible for him to deprive himself of his omnipotence and lay down his power of separating them; so they remain distinct.

[Finally, Descartes mentions a literary reference of Regius's that he doesn't get, and signs off with warm good wishes to Regius and his wife and daughter.]

⊕ [summer 42: Regius writes to Descartes with a long recital of the series of events at the University of Utrecht.]

⊕ [7 ix.42: Descartes writes to Bourdin, expressing surprise at the tone of Bourdin's latest response, and saying that if Bourdin publishes that response he should publish with it the texts of Descartes's that it responds to, as Descartes did with the Seventh Objections to the *Meditations*.]

#### to Pollot, 6.x.1642:

I have already heard so many remarkable reports of the outstanding intelligence of the Princess of Bohemia that I'm less surprised to learn that she reads books on metaphysics than I am proud that she has read and approved of mine. Her judgement means much more to me than does that of those learned doctors whose rule is to accept the truth of Aristotle's views rather than the evidence of reason. I shan't fail to come to The Hague as soon as I hear that you have arrived, so that with your help I may have the honour of paying my respects to the Princess and putting myself at her disposal. Since I hope that this will be soon, I will put off till then the opportunity of engaging in further discussion with you, and expressing my thanks for all the ways in which I am bound to you. [A considerable correspondence between the philosopher and the princess began, with a letter by her, exactly one year after this. None of these 60 letters are included here; they constitute a separate item on the website at [www.earlymoderntexts.com](http://www.earlymoderntexts.com).]

⊕ [7.x.42: Huygens writes to Descartes, enclosing a book which he had been asked to send on to Descartes, and reporting the recent death of his brother.]

#### to Huygens, 10.x.1642:

I spent yesterday reading Thomas White's dialogues entitled *On the World*, which you kindly sent me; but I haven't noticed any passages where he seems to be trying to contradict me. In the passage where he says that better telescopes than the

ones we have *can't* be constructed, he speaks so favourably of me that it would be bad-tempered of me to object. It's true that some of his views are very different from mine, but he doesn't seem to have me in mind when he expresses them, any more than he does when expressing views that agree with what I have written. I'm happy to allow every writer the freedom that I want for myself—the freedom to write frankly whatever he believes to be the most true, without worrying about whether it agrees or clashes with anyone else's views. I find many good things in his third dialogue; but in the second, where he tries to imitate Galileo, I think all the material is too complicated to be true, because nature employs only means that are very simple. I wish there were many books like this; they could prepare people's minds to accept other opinions than those of the Schoolmen, without (I think) harming my own.

For the rest, I am doubly obliged to you, Sir, because neither your personal distress nor the many occupations that I'm sure it has given you has prevented you from thinking of me and taking the trouble to send me this book. I know that you have a great affection for your family and that the loss of any of them must be extremely painful for you. I know also that you have great strength of mind and are familiar with all the remedies that can lessen your sorrow. But I can't refrain from telling you of one that I have always found most powerful, not only to •enable me to bear the death of those I have loved but also to •prevent me from fearing my own death—though I love life as much as anyone. It consists in *thinking about the nature of our souls*. They last longer than our bodies, and are born to enjoy pleasures and felicities much greater than those we enjoy in this world; I think I know this so clearly I can't conceive that those who die don't pass to a sweeter and more tranquil life than ours. We shall go to find them some day, while retaining our memory of the

past (I think we have an intellectual memory that is certainly independent of the body). And although religion teaches us much on this topic, I confess to having a weakness that most of us have: although we want to believe all that religion teaches—although we think we *do* firmly believe it—we are not usually so moved by •it as by •what we are convinced by very evident natural reasons.

⊕ [13.x.42: Descartes writes to Mersenne: troubles with the mail; books and papers received; White's book with its praise of Descartes ('I blushed'); regret over the news that the philosopher Kenelm Digby 'has been arrested by the parliament in England'; criticisms of the diagrams in Descartes's *Optics* ('ignorance or puerile hostility'); a few other things.]

⊕ [20.x.42: Descartes writes to Mersenne, two pages on the physics of smoky chimneys; water-spouts ('answering your question would require experiments that I haven't done'); 'You haven't told me anything about what is being said in Paris about my reply to Bourdin's Seventh Objections.']

⊕ [17.xi.42: Descartes writes to Vatier, expressing gratitude for Vatier's support, and saying that he hopes to be on good terms with the Jesuits generally, despite Bourdin.]

⊕ [17.xi.42: Descartes writes to Mersenne, reporting that Vatier had been wrongly reported as opposed to him, and has written to him saying 'I must confess that you have, using your principles, clearly explained the mystery of the Holy Sacrament without resorting to any "real accidents"'; some ideas about what happens when water is poured into wine; and about the physics of projectiles.]

⊕ [7.xii.42: Descartes writes to Mersenne about Voetius's just-published book attacking him. It doesn't merit a reply, he says, except that many good people would be unhappy and perplexed if they read this attack and had nothing to put up against it. He accuses Voetius of telling lies about—among other things—Mersenne's own attitude to Descartes. Then a few remarks about some questions in physics.]

⊕ [4.i.43: Descartes writes to Mersenne with thanks for a letter Mersenne has written to Voetius on Descartes's behalf, comments on a friendly letter from Dinet, and remarks about an experiment Mersenne has conducted to determine the relative weights of air and water. Regarding this last, many more experiments are needed; it would be helpful if 'the Cardinal [Richelieu, who died a month earlier] had left you two or three of his millions to pay for them!']

⊕ [14.i.43: Descartes writes to Huygens about a book Huygens has sent him, which he doesn't admire, and about a reported kind of stuff that turns towards the sun, night and day.]

⊕ [2.ii.43: Descartes writes to Mersenne with comments on a heat experiment Mersenne has conducted and questions about the force needed to rarefy and to condense air; an explanation of why air rushes into bellows when they are opened; permission for Mersenne to make, in his own writings, what use he pleases of anything that Descartes has written; comments on the physics of speed; no need to see Fermat's latest geometrical work; printing of the *Principles of Philosophy* will start this summer, but when it will be finished is up to the publishers.]

### to Picot, 2.ii.1643:

I hope you will find Touraine to your liking. That is a beautiful countryside, though I'm afraid that the minor nobility will be intrusive there, as it is in most of France. For myself, I would rather acquire property in a bad region than in a good one, because for the same money I could have a much bigger property, which would help to protect me from being inconvenienced by my neighbours. But, that aside, it's very nice to have neighbours who are good people [*honnêtes gens*], and as an example of that I cite M. de Touchelaye, whom you will surely find to be an excellent neighbour.

⊕ [18.ii.43: Descartes writes to Huygens, responding to his 26.v.42 request for help with the problem of raising water. 'I don't much trust

experiments that I haven't done myself, so I have had a 12ft pipe made for this purpose; but I have so few hands, and the workers are so bad at doing what they are told to do, that I haven't been able to learn anything except. . . .'—followed by a dozen pages of detailed discussion of the theory and possible practice of pumping water. AT [see Glossary] say that this letter is 'especially remarkable because it presents the theory of liquid-flow that is ordinarily credited solely to Torricelli'.]

⊕ [23.ii.43: Descartes writes to Mersenne, wanting to ensure that the head gardeners at Luxembourg and the Tuileries are paid for the designs they have produced, and that the money ultimately comes from Descartes. Then five pages on the physics of the movement of water.]

⊕ [23.iii.43: Descartes writes to Mersenne, with an initial page of exasperated comment on the erratic performance of the mail system, connected with his not knowing who has read what, which letters have been replied to, etc. Then six pages of physics, and a PS about the foolishness of Bourdin.]

### to Colvius, 23.iv.1643:

I'm most grateful for the astronomical news that you have kindly sent me; it was all new to me; I hadn't heard a word about it before your letter came. But since then I have heard from Paris that Gassendi, who has inherited Galileo's famous (good) telescope, used it in exploring these five new planets of Jupiter and concluded that really they are five fixed stars which the good Father Rheita had mistaken for planets. It won't be hard to discover the truth about that. And the answer won't be overwhelmingly big news, because the previous discovery of four planets of Jupiter caused so much amazement that it hardly be increased by the discovery of five more!

When your letter arrived I was engaged in a description of the heaven [see Glossary] and especially of the planets, but I had to set that aside for a few days. For one thing, I was

on the point of moving from here to a place close to Almar op de Hoef, where I have rented a house; also, I had in my hands a book *On the Cartesian Philosophy* (you may have heard of it), which is said to be written by Voetius, and I scrawled away trying to defend myself against the insults that are launched at me from all over the place. I'm sure that people with honour and conscience will find my cause so just that I'm not afraid to submit it to your judgment, although I am in a struggle with a member of your profession.

**to Mersenne, 26.iv.1643:**

[This letter responds to Mersenne's question whether two missiles of equal matter, size and shape must travel the same distance if projected at the same speed in the same direction through the same medium.] I have to set out two principles of physics before I can answer your questions. •Strictly speaking: one view of mine about the principles of physics, and one principle•.

The first is that I don't suppose there are in nature any *real qualities* [see Glossary] that are •attached to substances like so many little souls to their bodies and •separable from them by divine power; so I don't attribute to motion, and all the other modifications of substance that are called 'qualities', any more reality than is commonly attributed by philosophers to *shape*, which they call only a 'mode' and not a 'real quality'. My main reason for rejecting these 'real qualities' is that I don't see that the human mind has any notion or specific idea to conceive them by; so that when we talk about them and assert their existence we don't understand what we are saying. A secondary reason is that the philosophers posited these real qualities only because they thought they needed them to explain all the phenomena of nature, whereas I find on the contrary that the phenomena are better explained without them.

The other principle is that whatever is—whatever exists—remains in the same state unless and until some external cause changes it; so that I don't think there can be any *quality* or *mode* that perishes of itself. If a body has a certain shape, it keeps it unless it loses it through a collision with some other body; and in the same way if a body is moving, it must continue to move unless it is stopped by some external cause. I prove this by metaphysics, thus:

God, who is the author of all things, is entirely perfect and unchangeable; so it strikes me as logically absurd to suppose that any simple thing that exists, and so has God for its author, should have in itself the principle [see Glossary] of its own destruction.

Qualities such as heat and sound aren't a difficulty for this view; they are only motions in the air, where they encounter various obstacles that make them stop.

Since motion is not a *real quality* but only a *mode*, it can be conceived only as the change by which a body leaves the vicinity of some other bodies; and there are only two kinds of change to consider—change in its •speed and change in its •direction. This change can come from various causes, but if these causes impel it in the same direction with the same speed, it's impossible that they should give it any difference of nature.

That's why I believe that

if two missiles that are equal in matter, size and shape set off with the same speed in the same medium and along the same line in the same direction, neither could go further than the other'

[The letter continues with three pages on the physics of collisions.]

**to Huygens, 24.v.1643:**

Mersenne seems to think that I'm still a soldier and am on active service with you: he has written letters to you and addressed them to me! The one I'm sending with this has been a long time reaching me, and I don't know when it will get to you. The main thing is that there's nothing of importance in it (it was open when it reached me, so I took the liberty of reading it). I see that it is mainly about the properties of magnets; I'll add my advice to Mersenne's on this topic, so that this letter will have some content.

I think I have already told you that I explain all the properties of magnets by means of a very subtle and imperceptible kind of matter which •emerges continuously from the earth, not just from the pole but from every part of the Northern hemisphere, and •moves southward and immediately re-enters the earth in every part of the Southern hemisphere. There's a corresponding kind of matter that emerges from the earth in the Southern hemisphere and re-enters the earth in the north. The particles of these two kinds of matter are shaped in such a way that

- they can't easily pass through the gaps in air or water or many other kinds of body; and
- the pores of earth and of magnets that let through the particles coming from one hemisphere can't be entered by those from the other.

I think I demonstrate all this in my *Physics* [*Principles of Philosophy*], where I explain the origin of those kinds of subtle matter, and the shapes of their particles, which are long and spiralling like a screw—the northern ones twisting in one way and the southern ones in the other. [He then goes on to apply this theory in explaining the behaviour of compass-needles.]

**to Voetius, v.1643:**

[This open letter, published in Latin and in Flemish, was about 200 pages long. The present version will present the parts selected for translation by CSMK, with gratitude to its editors for making the selection.]

... Even if the philosophy that you are raging against were unsound—which you haven't shown and never will—how could it possibly be bad enough to require that its author be slandered with such atrocious insults? The philosophy that its other devotees and I are working on is nothing but knowledge of the truths that can be perceived by the natural light and can benefit mankind; so that no study can be

- more honourable,
- more worthy of mankind, or
- more beneficial in this life

than this one. In contrast with that, the philosophy ordinarily taught in the Schools and universities is merely a collection of opinions—mostly *doubtful* opinions, as is shown by the continual debates in which they are thrown back and forth. They are quite useless, too, as long experience has shown to us: no-one has ever derived any practical benefit from 'prime matter', 'substantial forms', 'occult qualities', and the like. It's just not reasonable for those who have learned such opinions, which even they admit are uncertain, to condemn others who are trying to discover more certain ones. It is certainly bad to want to innovate in matters of religion; everyone says he believes that his own religion was instituted by God, who cannot err; so he believes that any innovation must be bad. But philosophy is different; everyone readily admits that men don't yet know enough in philosophy, and its scope can be expanded by many splendid discoveries; so in philosophy there is nothing more praiseworthy than to be an innovator. . . .

You say that any prospective disciple of mine must first ‘forget all he has learned from others’. Yet in all the passages you cite there’s not a word of ‘forgetting’ but only of removing prejudices—nor is ‘forgetting’ talked about anywhere else in my writings; so the reader will easily judge how much faith to place in your citations. It is one thing to set aside prejudices, i.e. to **stop assenting to** opinions that we rashly accepted on a previous occasion; this depends merely on our will—i.e. it’s something we can effectively *choose* to do—and it is wholly necessary in order to lay the first foundations of philosophy. But it is something else entirely to **forget** such opinions, which is hardly ever in our power. . . .

I have read many of your writings, but have never found any reasoning in them, or any thought that isn’t base or commonplace—nothing that suggests someone who is intelligent or wise.

I say ‘wise’, not ‘learned’, for if you take ‘learning’ to cover everything learned from books, good or bad, I’ll gladly agree that you are the most learned of men. . . . By ‘wise’ I mean the man who has improved his intelligence and character by careful study and cultivation. Such education is, I am convinced, to be acquired not by indiscriminately reading book after book, but by •reading only the best books and re-reading them *often*, by •taking every opportunity for discussion with those who are already wise, and by •continually contemplating the virtues and pursuing the truth. Those who seek wisdom from standard texts and indexes and concordances can cram a lot into their memories in a short time, but this doesn’t make them wiser or better people. There’s no chain of reasoning in such books; everything is decided either by appeal to authority or by short summary syllogisms; and those who try to learn from these sources become accustomed to placing equal trust in the authority of any writer; so little by little they lose the use

of their natural reason and put in its place an artificial and sophistical reason. For notice that the true use of reason, which is the basis of all education, all intelligence and all human wisdom, consists not in isolated syllogisms but only in scrupulously and carefully taking account of everything required for knowledge of the truths we are seeking. This can hardly ever be expressed in syllogisms, unless many of them are linked together; so those who use only isolated syllogisms are bound to leave out some part of what needs to be looked at as a whole, and thus grow careless and lose the use of a mind that is in good order. . . .

•You claim that in my philosophy• God is thought of as a deceiver. This is foolish. Although in my First Meditation I spoke of a supremely powerful deceiver, I wasn’t there working with the conception of the true God because—as you yourself say—it is impossible that the true God should be a deceiver. If I ask you how you know this to be impossible, you must answer that you know it from the fact that ‘God is a deceiver’ implies a conceptual contradiction, i.e. can’t be conceived. So the very point you made use of to attack me is sufficient for my defence. . . .

You deny that anyone can rightly argue ‘I am thinking, therefore I exist’; all the sceptic can conclude, you say, is that he *seems to himself* to exist—as if anyone using his reason, however sceptical he might be, could ‘seem to himself’ to exist without at the same time understanding that he really exists whenever this seems to him to be the case. You are denying what is the most evident proposition there could possibly be in any science. . . .

You claim that my arguments to prove God’s existence have force only for those who already know he exists, because they depend entirely on notions that are innate within us. But when the knowledge that P is said to be naturally implanted in us, this doesn’t mean that we explicitly and

openly know that P; all it means is that we can come to know that P by the power of our own intellect, without any sensory experience. All geometrical truths are of this sort—not just the most obvious ones, but all the others, however abstruse they appear. Plato reports Socrates asking a slave boy about the elements of geometry, thereby getting the boy to dig out certain truths from his own mind—truths that he hadn't realised were there. . . .

You say that my way of philosophising opens the way to scepticism. . . .because I won't accept as true anything that isn't so clear that it leaves no room for doubt; and you say that not even truths known by faith meet this standard, since we very often have occasion to doubt them. [The next sentence goes beyond Descartes's wording in ways that can't be shown by ·small dots· etc.; but it is true to the point he is making.] If you are equating 'P is open to doubt' with the possibility that one might have doubts about P at some particular time when it comes into one's conscious mind, then you are destroying all faith and all human knowledge, because it's impossible ever to have any cognition that isn't 'open to doubt' in *that* sense; so it's you who are the sceptic! Of course someone who at one time has true faith or evident cognition of some natural thing may at another time not have it—this merely shows the weakness of human nature, since we don't always remain fixed on the same thoughts. It doesn't follow that there's any doubt in the knowledge itself. So you don't establish anything against me; for I was speaking not of any certainty that would endure throughout an entire human life, but only of the kind of certainty that is achieved at the moment when some piece of knowledge is acquired. . . .

You say that 'René may rightly be compared with that cunning champion of atheism, Cesare Vanini, because he uses the very same techniques to erect the throne of atheism in the minds of the inexperienced.' Everyone will marvel at the

absurdity of your impudence!. . . . Even if it were true (and I strongly deny that it is) that I replace the common traditional arguments by ones that have been found to be invalid, it still wouldn't follow that I should be even suspected—let alone guilty—of atheism. Anyone who claims to refute atheism and produces inadequate arguments should be accused of incompetence, not face a summary charge of atheism. . . .

Your approach to all this implies that Thomas Aquinas (who was further than anyone from the slightest suspicion of atheism) should also be compared with Vanini, because his arguments against the atheists have turned out on close examination to be invalid. Indeed (if I may be forgiven for saying so) comparing him with Vanini would be more apt than comparing me with him, because my arguments have never been refuted as his have. . . .

I don't doubt that some day my arguments, despite all your snarling, will have the power to call back from atheism even those who are too slow-witted to understand them; because they'll know that •the arguments are accepted as the most certain demonstrations by all those who understand them properly, i.e. by all the brightest and wisest people, and that •although they are looked at askance by you and many others, no-one has been able to refute them. . . .

It won't do you any good to call me 'a foreigner and a papist'. You don't need me to tell you that the treaties between my King and the rulers of the Netherlands are such that, even if this were my first day in your country, I would be entitled to enjoy the same rights as those who were born here. But I have spent so many years here, and am so well known by all the more honourable citizens, that even if I had come from a hostile country I would have stopped being regarded as a foreigner long ago. Nor do I need to appeal to the freedom of religion that is granted us in this republic. I merely declare that your book contains such criminal lies,

such scurrilous insults and atrocious slanders, that a man couldn't launch them against his enemies, or a Christian against an infidel, without standing convicted of wickedness and criminality. I may add that I have always experienced such courtesy from the people of this country, have been received in such a friendly manner by all those I have met, and have found everyone else to be so kind and considerate and so far removed from the coarse and impertinent freedom with which you indiscriminately attack people whom you don't know and who have done you no harm, that I'm sure the people will feel more aversion towards you, their compatriot, than they would towards any foreigner. . . .

⊕ [30.v.43: Descartes writes to Mersenne about mailing arrangements now that Descartes is living in Amsterdam, and about recent experiments with magnets and pendulums.]

⊕ [6.vi.43: Huygens writes to Descartes about Mersenne's mistake in mailing things to Huygens via Descartes, his 'indignation' that Descartes has used some of his precious time to copy a recent contribution by Huygens to a literary controversy, and Descartes's letter to Voetius. It gave Voetius a whipping, he says, and it was deserved; but he warns Descartes that he will have opponents because theologians tend to stick up for one another.]

⊕ [9.vi.43: Colvius writes to Descartes expressing admiration, and outraged indignation over Descartes's treatment by Voetius and others.]

### to Vorstius, 19.vi.1643:

[Vorstius has written asking for Descartes's views about spirits in the human body. Descartes, pleased with this letter, says he will respond 'in a few words'.]

You know that in my physics everything is done in terms of the sizes, shapes, positions and movements of the particles that bodies consist of. I use the notion of *particle* because

although every body is infinitely divisible ·so that there are no atoms·, there's no doubt that a body is more easily divided into some parts than into others. Medical men are well aware of this; they often say that some bodies have thin parts, and others thick parts, and so on.

You also know that from the fact that

- a vacuum is impossible

and the further fact that

- many small pores are to be seen in all terrestrial bodies,

I infer that

- those pores are filled with a certain subtle matter.

And I hold that this subtle matter differs from terrestrial bodies only in being made up of much smaller particles that •don't stick together and •are always moving very fast. And as a result of this, when they pass through the pores in terrestrial bodies and collide with the particles the bodies are composed of, they often make the particles vibrate, or even push them apart and sweep some of them away.

The particles that are swept away by the subtle matter in this fashion make up •air, •spirits and •flame. Air is very different from flame in that the. . . particles that make up flame move much faster than those that constitute air. The spirits are intermediate between the two: they are more agitated than the particles in calm air, and less than those of flame. And since there are infinitely many intermediate steps between a slow motion and a fast one, we can take 'spirit' to apply to every body consisting of terrestrial particles that are swimming in subtle matter and are more agitated than the ones that make up air, but less agitated than those that make up flame.

It's easy to demonstrate that the human body contains many such spirits. First, in the stomach there's a solution of nutrients subjected to heat; and heat is nothing but a greater



than usual agitation of material particles, as I explained in *Meteorology*. And the spirits are created from the particles of terrestrial bodies that are the easiest to pull apart. So there must be a large quantity of spirits from the food contained in the stomach passing into the veins along with the chyle; these are called *natural spirits*.

These spirits are increased in the liver and in the veins by heat—i.e. by the agitation occurring there. While the chyle is turning into blood, many of its particles separate off, creating more spirits. When this blood then comes into the heart, which is warmer than the veins, it immediately becomes rarefied and dilates. This is the source of the beating of the heart and the arteries; and this rarefaction causes yet more particles of blood to separate off, thus converting them into the spirits that the medical men call *vital spirits*.

The particles of blood leaving the heart by the great artery are agitated in the highest degree and travel straight through the carotid arteries toward the middle of the brain, where they fill its cavities and—once they are separated from the rest of the blood—form the *animal spirits*. What separates them from the rest of the blood (I think) is the fact that the gaps through which they enter the brain are so narrow that the rest of the blood can't get through.

These animal spirits flow from the cavities of the brain through the nerves to all the muscles of the body, where they serve to move the limbs. Finally they leave the body by transpiration [= something like sweating] that can't be detected. Not merely the spirits that passed along the nerves, but also those that merely travelled in the arteries and veins. Whatever leaves the animal's body by this undetectable process of transpiration has to have the form of spirits. So I am very surprised that anyone denies the existence of spirits in animals, unless he is making a merely verbal point and objecting to giving the name 'spirits' to particles of terrestrial

matter that are separated from each other and driven about at great speed.

These are my present thoughts on the origin and movement of the spirits; their varieties and relative strengths and functions can easily be inferred from what I have said. There's virtually no difference between *natural* and *vital* spirits, neither of which are separated from the blood. Only the *animal spirits* are pure; but they vary in their effects depending on differences in the particles that make them up. Thus spirits derived from wine and reaching the brain in excessive quantities cause drunkenness; those derived from opium cause sleep, and so on. This is made clearer in chapters 1–3 of my *Meteorology*; that treatment of vapours, exhalations and winds can easily be applied to spirits.

Thank you very much for the friendly role (others have told me about it) that you have played in opposing my detractors. . . .

⊕ [5.vii.43: Descartes writes to Colvius about his troubles with Voetius and the University of Utrecht.]

⊕ [6.vii.43: Descartes writes to the Governors of the University of Utrecht about the troubles Voetius is making for him.]

⊕ [17.x.43: Descartes writes to Graswinckel, passionately thanking him for his support ('I see you as a good angel sent by God to help me'), and asking Graswinckel, as an official of the royal court, to speak to 'the Ambassador' and 'his Highness' the Prince of Orange on Descartes's behalf, so that he can get help in 'escaping the traps that have been set for me'.]

⊕ [17 and 21 and 23.x.43: Descartes writes to Pollot, all three letters concerning the Voetius matter. Similarly the letter of 30.xi.43.]

⊕ [7.xi.43: Descartes writes to Wilhelm, Counsellor of the Prince of Orange, thanking him for help, and expressing anxiety about whether the University of Utrecht is legally able to have Descartes arrested and charged in other parts of the country.]

**to Buitendijk, 1643?:**

You have asked me with three questions that so clearly indicate the strength and sincerity of your desire for learning that it gives me pleasure to answer them.

[The first sentence of this next paragraph equates a question about what is permissible [*liceat*] with a question about what is naturally permissible [*naturaliter liceat*]. It's a strange equation, and its second term doesn't obviously mean anything. Let us whip past this without worrying; it is Descartes's lead into a discussion in which he clearly distinguishes what is permissible [*liceat*] from what is possible [*possit*].]

**(1)** Your first question is whether it is ever permissible to doubt about God, i.e. whether it is naturally permissible to doubt of the existence of God. I think we have to distinguish **(i)** doubt involving the intellect from **(ii)** doubt involving the will. **(i)** The intellect is not a faculty of choice, so we mustn't ask whether something is permissible for it but only whether something is possible for it. Now, there are certainly many people whose intellect *can* doubt the existence of God. This includes all those who can't give an evident demonstration of his existence, even though they have the true faith; for faith belongs to the will, and with that set aside a person with faith can use his natural reason to examine whether there is a God, and thus doubt about God. **(ii)** With the will we have to distinguish doubt as an end from doubt as a means. Anyone who sets out to doubt about God with the aim of persisting in doubt is committing a serious sin by wanting to remain in doubt on a matter of such importance. But someone who embarks on doubt as a means to getting a clearer knowledge of the truth is acting piously and honourably, because nobody can will the end without willing also the means, and in Scripture itself men are often invited to seek this knowledge of God by natural reason. And if someone for the same purpose temporarily puts out of his mind all the

knowledge of God that he can have, he isn't committing a sin. We aren't bound to be always having the thought that God exists: that wouldn't permit us to sleep or to do anything else, because every time we do something else we put aside for that time all our knowledge of the Godhead.

**(2)** Your second question is whether it is permissible to suppose anything false in matters pertaining to God. Here we must distinguish the true God who is clearly known from false gods. Once the true God is clearly known, it's not only not permissible—it isn't even *possible*—for the human mind to attribute anything false to him. (I have explained this in my *Meditations*). But it's not like that with •false divinities,

i.e. evil spirits, idols, or other such gods invented by the error of the human mind—all these are called 'gods' in Holy Scripture—

or with •the true God, if he is known only in a confused way. Saying something false about any of these as a hypothesis can be either good or bad, depending on whether the purpose of formulating the hypothesis is good or bad. Attributing something hypothetically isn't voluntarily affirming it as true; it's merely proposing it to the intellect as something to be thought about; so it's not strictly good or bad—or if it is, that's because of the purpose for which the hypothesis was framed. Thus, take the case of a person who imagines a deceiving god—even the true God, but not yet clearly enough known this person or to the others for whom he frames this hypothesis. Suppose that he doesn't misuse this fiction for the evil purpose of persuading others to believe something false of the Godhead, but uses it only to enlighten the intellect, and bring greater knowledge of God's nature to himself and others. Such a person absolutely isn't sinning in order that good may come. There is no malice *at all* in his action; what he does is good in itself, and no-one can rebuke him for it except slanderously.

(3) Your third question concerns •the motion which you think I regard as •the soul of brute animals. I don't remember having written that motion is the soul of animals; indeed I have not publicly revealed my views on the topic. But because we usually mean 'soul' as the name of a kind of •substance, and because I think that motion is a •mode of bodies, I wouldn't want to say that motion is the soul of animals. (By the way, I don't admit various kinds of motion, but only local motion, .i.e. change of place., which is common to all bodies, animate and inanimate alike.) I would prefer to say with Holy Scripture (Deuteronomy 12:23) that blood is their soul, for blood is a fluid body in very rapid motion, and its more rarefied parts are called spirits. These move the whole mechanism of the body as they flow continuously from the arteries through the brain into the nerves and muscles.

**to Father \*\*\*\*, 1643:**

[The date and addressee of this letter are in doubt. Clerselier notes that it is addressed to a 'Reverend Jesuit Father'. The phrases 'your Society' and 'your Company' both refer to the Jesuits, 'the Society of Jesus'.]

[Descartes starts this letter by expressing intense pleasure at being allied with such a person as the addressee, because of 'your merit, your Society, and your being a real mathematician'—not merely someone who wants to appear to be a mathematician. That reminds Descartes of Bourdin; he would ask the addressee to reconcile Bourdin to him if he thought there was any chance of success, but there

isn't. He continues:] All I want to say to you about him is that I don't regard what has happened between him and me as having *anything* to do with your Company, my infinite obligations to which utterly outweigh the small harm he has done to me. I am even more obliged to you than to the others because of the *alliance* with my brother. [The French *alliance* meant relatedness-by-marriage. Evidently the addressee of this letter was a brother-in-law of one of Descartes's brothers.] For that reason. . . ., I would gladly give you my thoughts about the rise and fall of the tides, but. . . [and he explains that his account requires suppositions that might seem incredible to someone who didn't know the fundamentals of Descartes's physics].

All I can say about the book *De Cive* is that I believe its author [Hobbes] wrote the Third Objections against my *Meditations*, and that I find him to be much abler in moral philosophy than in metaphysics or physics. Not that I could in any way approve his principles or his maxims. They are extremely bad, extremely dangerous, because he supposes that all men are wicked, or gives them reason to be so. His whole aim is to write in favour of the monarchy; but this could be done more effectively and soundly by adopting maxims that are more virtuous and solid than his. And he writes so fiercely against the Church and the Roman Catholic religion that I don't see how he can prevent his book from being censured unless he has someone very powerful on his side.

\* \* \* \* \*

[We have about 20 letters that Descartes wrote or received in the second half of 1643; they are variously in Latin, French and Flemish; are mostly from or to his usual correspondents; and mostly concern the legal battle with Voetius. Also 13 letters that he wrote early in 1644. Six are to Pollot; they and some others mainly concern Descartes's troubles with Voetius and the University of Utrecht, though other things also come in—including magnets and a borderline dispute between the Netherlands and France. The present version, like CSMK, skips all these and goes immediately to May 1644.]

**to Mesland, 2.v.1644:**

I know that it is very difficult to enter into another person's thoughts, and experience has taught me how difficult many people find mine. So I am all the more grateful to you for the trouble you have taken to examine them; and I cannot help thinking highly of you when I see that you have taken such full possession of them that they are now more yours than mine. The difficulties you were kind enough to put to me come rather from •the subject-matter and •defects in my writing than from •lack of understanding on your part. You have in fact provided the solution to the main ones. Still, I'll tell you my views on all of them.

I agree that many physical and moral causes that are **particular and limited** can produce a certain effect but can't produce many others that appear to us less remarkable. Thus one human being can produce another human being, but no human being can produce an ant; and a king who makes a whole people obey him can't always get obedience from a horse. But in the case of a **universal and indeterminate** cause, it seems to be a common notion [see Glossary] of the most evident kind that whatever can do the greater can also do the lesser; this is as evident as the maxim that the whole is greater than the part. Rightly understood, this notion applies also to all particular causes, moral as well as physical. For it would be a greater thing for a human being to be able to produce human beings and ants than to be able only to produce human beings; and a king who could command horses as well would be more powerful than one who could command only his people.

It doesn't matter much whether my second proof, the one based on our own existence, is seen as different from the first proof or merely as an explanation of it. Just as it is an effect of God to have created me, so it is an effect of him to have

put the idea of himself in me; and his existence is proved by *any* of his effects. Still, it seems to me that all these proofs based on his effects are reducible to a single one; and also that they are incomplete if •the effects aren't evident to us (that's why I considered my own existence rather than that of heaven and earth, of which I am not equally certain) and if •we don't add to them our idea of God. For since my soul is finite, the only way I can know that the order of causes is not infinite is through the idea I have in myself of the first cause; and even if we admit a first cause that keeps me in existence, I can't say that it is God unless I truly have the idea of God. I hinted at this in my reply to the First Objections; but I did it very briefly so as not to brush aside too briefly the arguments of others who think that a series can't go on for ever. I don't accept that principle; on the contrary, I think that in the division of the parts of matter there really is an endless series, as you will see in my *Principles of Philosophy* II.20, which is now being printed.

I do not know that I laid it down that God always does what he knows to be the most perfect, and it doesn't seem to me that a finite mind can make a judgment about that. But I tried to solve the difficulty about the cause of error on the *assumption* that God had made a perfect world; without that assumption the difficulty about error disappears altogether.

Thank you for pointing out the places where St Augustine can be quoted in support of my views. Some other friends of mine had already done so, and I'm delighted that my thoughts agree with those of such a great and holy man. I'm not one of those who want their views to appear novel; on the contrary, I make my views conform with those of others so far as truth permits me.

The soul differs from its ideas, I hold, in just the way a piece of wax differs from the various shapes it can have. When the wax acquires a certain shape, that is not something

that it actively does but something that it passively has done to it. In the same way, the soul passively receives its various ideas; its only activities are its volitions. It receives its ideas partly from objects that come into contact with the senses, partly from impressions in the brain, and partly from prior dispositions in the soul and from movements of the will. Similarly, the wax owes its shapes partly to the pressure of other bodies, partly to shapes or other qualities that it already possesses (e.g. heaviness or softness), and partly also to its own movement—given that it has in itself the power to continue moving once it has been started.

The difficulty we have in •learning the sciences and in •thinking clearly with the ideas that are naturally known to us arises from the false preconceptions of our childhood, and other causes of error that I have tried to explain at length in *The Principles of Philosophy* I.71–4.

As for memory, I think that the memory of •material things depends on the traces remaining in the •brain after an image has been imprinted on it; and that the memory of •intellectual things depends on other traces remaining in the mind itself. But these are utterly different from the brain-traces, and I can't explain them accurately by any illustration drawn from corporeal things. The traces in the brain, on the other hand, •are easy to describe schematically: they dispose the brain to move the soul in the same way as it moved it before, and thus to make it remember something—like the folds in a piece of paper that make it easier to fold again in that way.

The moral error that occurs when we believe something false with good reason—for instance because someone whose authority we trust has told us—doesn't involve there being something missing •from our make-up•, provided it is affirmed only as a rule for practical action and there's no moral possibility of knowing better. So it isn't strictly an

error; it would be one if it were asserted as a truth of physics, because in that context the testimony of an authority is not sufficient.

As for free will, I haven't seen what Petau has written about it in his recently published book; but judging by your account of your opinion on the topic, you and I seem not to be far apart on this topic. First, *please* take in that I didn't say

- a person is indifferent only if he lacks knowledge, but rather that
- the fewer reasons a person knows that impel him to choose one side rather than another, the more indifferent he is;

and I don't think anyone can deny this. I agree with you that we can suspend our judgement; but I tried to explain *how* we can do this. It seems to me certain that

a great light in the intellect is followed by a great inclination in the will;

if we see very clearly that a thing *x* is good for us and go on thinking about it, it's hard—actually, in my view it's *impossible*—for us to stop the course of our desire •for *x*•. But the nature of the soul is such that it doesn't focus on any one thing for long—hardly for more than a moment—and the result of that is that

as soon as our attention turns from the reasons that show us that *x* is good for us, and we have only a memory that it *did* appear desirable to us, we can bring into our mind some other reason to make us •doubt that *x* is good for us it and thus •suspend our judgement and perhaps even •form a contrary judgement.

Thus, since you regard freedom not simply as indifference but rather as a real and positive power to determine oneself, the difference between your view and mine is a merely

verbal one—for I agree that the will does have such a power. But I don't see that it makes any difference to that power whether it •is accompanied by indifference, which you agree is an imperfection, or •is not so accompanied, when there's nothing in the intellect except light, as in the case of the blessed who are confirmed in grace. I call 'free' in the general sense whatever is voluntary, while you want to restrict the term to the power to determine oneself at a time when one is indifferent. But in matters of wording I wish above all to follow usage and precedent.

As for animals that lack reason, it's obvious that they aren't free because they don't have this **positive** power to determine themselves; what they have is a pure **negation**, namely the power of *not* being forced or constrained.

Why didn't I discuss the freedom that we have to follow good or evil? Simply because I wanted to stay within the limits of natural philosophy, avoiding theological controversies as much as I could. But I agree with you that wherever there is an occasion for sinning, there is indifference; and I don't think that in order to do wrong it is necessary to see clearly that what we are doing is bad. All it takes is to see confusedly that it is bad, or merely to remember that we once judged it to be bad without in any way seeing it, i.e. without attending to the reasons that prove it to be bad. If we saw its badness clearly, it would be impossible for us to sin as long as we went on seeing it in that fashion; that's why they say that *omnis peccans est ignorans* [Latin: 'whoever sins does so in ignorance']. And if we see very clearly what we must do and therefore do it infallibly and without any indifference—as Jesus Christ did throughout his earthly life—there is still merit in that. We can't always attend perfectly to how we ought to act; so when we *do* pay attention to that, so that our will follows the light of our understanding so strongly that there's no longer any indifference at all, that is a good action. Also:

I didn't write that grace •prevents indifference, but simply that it •makes us incline to one side rather than to another, and so diminishes indifference without diminishing freedom; from which it seems to me to follow that this freedom doesn't consist in indifference.

I turn to the difficulty of conceiving how God has been free—with no pull either for or against—to make it false that the three angles of a triangle are equal to two right angles, or in general to make it the case that some pair of contradictories are both true. It's easy to dispel this difficulty by considering that **(i)** God's power can't have any limits, and that **(ii)** our mind is finite and created in such a way that it can

- conceive as possible the things God has wanted to be in fact possible,

but cannot

- conceive as possible things that God could have made possible but has wanted to make impossible.

From **(i)** we learn that •nothing could *make* God make it true that contradictories can't be true together, and therefore that he could have done the opposite, ·i.e. made it false that contradictories can't be true together. From **(ii)** we learn that even though this is true, we should not try to comprehend it, because our nature is incapable of doing so. And granted that God has willed that some truths should be necessary, this doesn't mean that he willed this necessarily; for it's one thing to •will that they be necessary and quite another to •will this necessarily, i.e. to •be necessitated to will it. I agree that there are contradictions that are so evident·ly contradictory· that we can't put them before our minds without judging them to be entirely impossible, like the one which you suggest: 'God might have brought it about that his creatures didn't depend on him.' But we shouldn't try to grasp the immensity of his power by putting these

thoughts before our minds. Nor should we think of God's intellect as prior to his will, or vice versa, because either of those thoughts distinguishes God's intellect from his will, whereas our idea of God teaches us that there is in him only a single activity, entirely simple and entirely pure. This is well expressed by Augustine: 'They are so because you (God) see them to be so'; because in God seeing and willing are one and the same thing.

When I distinguish lines from surfaces, and points from lines, I'm distinguishing one mode from another mode; but when I distinguish a body from its surfaces, lines and points, I'm distinguishing a substance from its modes. And there's no doubt that at least one mode belonging to bread remains in the Blessed Sacrament, since its outward shape, which is a mode, remains. As for the extension of Jesus Christ in that Sacrament, I gave no explanation of it because I wasn't obliged to, and I do my best to keep away from questions of theology, especially as the Council of Trent has said that Jesus Christ is present 'with a form of existence that we can scarcely express in words'. I quoted that phrase towards the end of my reply to the Fourth Objections, precisely to excuse myself from giving an explanation. But I venture to say that if people were a little more used to my way of philosophising, they could be shown a way of explaining this mystery that the enemies of our religion couldn't find fault with; it would shut them up.

There's a great difference between abstraction and exclusion. If I said simply that the idea I have of my soul

- doesn't represent it to me as being dependent on the body and identified with it,

this would be merely an abstraction, from which I could form only a negative argument which would be unsound. But I say that this idea

- represents it to me as a substance that can exist even though everything belonging to the body be excluded from it;

and from this I form a positive argument, and conclude that my soul can exist without the body. That implies that my soul is not extended, and this conclusion can be clearly seen in the nature of the soul, as you have observed, from the fact that one can't think of a half of a thinking thing.

#### **to Grandamy, 2.v.1644:**

I was extremely pleased to learn of the kind memories you have of me, and to receive Mesland's excellent letters. I shall try to reply to him with the utmost honesty, and without concealing any of my thoughts. But I can't give as much attention to my reply as I would have wished, because the place where I am now [Leiden] gives me many distractions and little spare time. (I have left my previous home so as to arrange passage to France, where I plan to go shortly.) I'll call on you there if at all possible; for I shall be delighted to return to La Flèche, where I spent eight or nine years during my youth. That is where the first seeds of everything I have ever learned were implanted in me, and I am wholly obliged to your Society for this.

If Debeaune's testimony is enough to get my *Geometry* to be respected, although few others understand it, I'm confident that Mesland's testimony will do the same for my *Meditations*, mainly because he has taken the trouble to adapt them to the style that is commonly used for teaching, and I'm deeply obliged to him for doing this. I'm sure that experience will show that nothing in my views should cause teachers to be nervous about them and to reject them; on the contrary, I think they will be found very useful and acceptable

The printing of my *Principles of Philosophy* would have been completed two months ago if the publisher had kept his word. But the drawings have delayed him, for he couldn't get them engraved as soon as he thought he could. But I hope to send you a copy quite soon, unless the wind carries me away from here before they are finished.

⊕ [4.vi.44, and again shortly thereafter: Regius writes to Descartes; we don't have these letters, but Baillet's biography of Descartes reports on their content—issues about the printing of the *Principles of Philosophy*, the translation into Latin of the *Discourse on the Method* and its accompanying essays, facts and rumours about who is on which side in the contest between Descartes and many of his contemporaries, and so on.]

⊕ [29.vii and 18.viii and 11.ix.43: Descartes writes to Picot, mainly about his (Descartes's) travels, including visits to several members of his family.]

**to \*\*\*, 1644:**

[The date and addressee of this letter are in doubt.]

You advise me to refer to Aristotle's *Meteorology* I:7 in my own defence. I was delighted to find this advice in the letter you did me the honour of writing, for I referred to just this passage in my *Principles* 4:204—it is, indeed, my only reference to Aristotle. I see it as a mark of your affection that you advise me to do exactly what I thought I should do!

As for any censure by Rome regarding the movement of the earth, I see no likelihood of that, for I explicitly deny this movement. No doubt people will at first think that because I uphold the system of Copernicus my denial that the earth moves must be a mere verbal trick adopted to keep me out of trouble. But I'm confident that when my arguments are examined it will be found •that they are serious and sound, and •that they show clearly that followers of Tycho Brahe's system are more obliged to say that the earth moves

than those who follow the Copernican system—when that is expounded in the way I expound it. Now, if we can't follow either of these systems then we must return to Ptolemy's, and I don't think the Church will ever require us to do this, since it is manifestly contrary to experience. And all the Scriptural passages that go against the movement of the earth are concerned not with the system of the world but only with the manner of speaking about it. Consequently, since I prove that if you follow my system then it isn't strictly correct to say that the earth moves, my account agrees entirely with those passages. Still, I'm much obliged to you for your warning about what may be said against me. . . .

You have understood very well what I wrote concerning the extent of surfaces—namely that the resistance of the air to a given quantity of matter is proportional to the area of its surface. For I don't think there is any such thing as *inertia*, absolutely speaking, i.e. as a property that an individual body can have just in itself; a body's inertia always depends on how it relates to the bodies that surround it. Thus, when I say that the larger a body is, the better it can transfer its motion to other bodies and the less it can be moved by them, my reason is that it pushes them all in one direction; whereas the small bodies surrounding it can never work together well enough to push it at the same instant in the same direction. So their effect on its movement is lessened by the fact that some are pushing it in one way and some in another.

**to Charlet, x.1644:**

Now that I have finally published the principles of my philosophy—to the annoyance of some people—you are one of those to whom I most desire to offer it: •because I am obliged to you for all the benefits I can get from my studies,



thanks to the care you devoted to my early education; and also •because I know how much you can do to prevent my good intentions from being wrongly interpreted by members of your Society who don't know me. I'm not afraid of my writings' being criticised or scorned by those who examine them; for I'm always very ready to admit my mistakes and to correct them when anyone is kind enough to tell me about them. But I want to avoid, as much as possible, the false preconceptions of those who will form a bad opinion of a bit of philosophy simply on the basis of their knowledge that it was I who wrote it (and did so without completely following the ordinary style). And because I already see that my writings have had the good fortune to be accepted and approved by quite a lot of people, I don't have much reason to fear that my views will be refuted. Indeed I see that those whose common sense is good enough, and who aren't already awash in contrary opinions, are strongly drawn to accept my views. So it seems that with the passage of time these views are sure to be accepted by most people—and, I venture to say, by those with the most sense. I know that people have thought •that my views are new; yet it can be seen here that I don't use any principles that weren't accepted by Aristotle and by everyone who has ever concerned himself with philosophy. People have also imagined •that my aim was to refute the received views of the Schools, and to try

to make them absurd; but they will see that I don't discuss them *at all*—I write as though I had never learned them. And people have hoped •that when my philosophy saw the light of day they would find numerous faults in it that would make it easy to refute; for myself, on the contrary, I hope that all the best minds will think my philosophy so reasonable that those who undertake to condemn it will be repaid simply by shame. . . .

⊕ [x.44: Descartes writes to Dinet, sending him a copy of 'the Principles of that unhappy philosophy that some tried to snuff out before it was born'. He thanks Dinet warmly for bringing it about that he and Bourdin have met and that Bourdin seems willing to be friendly.]

#### **to Bourdin, x.1644:**

When I had the honour of meeting you, you favoured me with an assurance of continuing good-will, and that leads me to write to you with a request. It is that will receive a dozen copies of my *Principles of Philosophy*, keep one for yourself, and be so good as to distribute the others to those of your colleagues who know of me. I specially ask you to send one or two copies to Father Charlet, and the same to Father Dinet, along with the letters I have written to them; and the others, please, for Father F. (who was once my teacher) and Fathers Vatier, Fournier, Mesland, Grandamy, and so on.