I. Re-conceiving the Human Being

I.A. Hylomorphism ➔ Cartesian Dualism at 50,000 ft

If, then, we have to give a general formula applicable to all kinds of soul, we must describe it as a first actuality of a natural organized body. That is why we can dismiss as unnecessary the question whether the soul and the body are one: it is as though we were to ask whether the wax and its shape are one, or generally the matter of a thing and that of which it is the matter. Unity has many senses…but the proper one is that of actuality. (Aristotle, DA II.1, 412b3-9)

To seek the nature of the soul, we must premise that the soul is defined as the first principle of life in those things that live: for we call living things *animate* (i.e., having a soul) and those things which have no life, *inanimate*. (Aquinas, ST I, Q75, a1)

We must assert that the intellect, which is the principle of intellectual activity, is the form of the human body. For that whereby anything primarily acts is a form of the thing to which the act is to be attributed…Now it is clear that the first thing by which the body lives is the soul. And as life appears through various operations in different degrees of living things, that whereby we primarily perform each of all these vital actions is the soul. For the soul is the primary principle of our nourishment, sensation, and local movement; and likewise of our understanding. Thus this principle by which we primarily understand, whether it be called intellect or the intellectual soul, is the form of the body. (Aquinas, ST I, A76, a1)

I.B. Hylomorphism ➔ Cartesian Dualism at 20,000 ft

[T]he intellectual principle which we call the mind or intellect has activity *per se* apart from the body. But nothing can act *per se* unless it subsists *per se*. For only what actually exists acts, and its manner of acting follows its manner of being. Forr which reason we do not say that heat heats, but that what is hot heats. We must conclude, therefore, that the human soul, which is called the *intellect or mind*, is something incorporeal and subsistent. (Aquinas, ST I, Q75, a2, emphasis added)

There is no other substantial form in man beside the intellectual soul; and…the soul, as it virtually contains the sensitive and nutritive souls, so does it virtually contain all inferior forms, and itself alone does whatever the imperfect forms do in other things. (Aquinas, ST I, Q76, a4)

As we have said already, all the powers of the soul belong to the soul alone as their principle. But some powers, viz., the intellect and will, belong to the soul alone as their subject. These powers must remain in the soul after the destruction of the body. But the other powers, viz., those of the sensitive and nutritive parts, have the composite as their subject. Now accidents cannot remain after the destruction of their subject. Wherefore, the composite being destroyed, these powers do not remain actually; but they remain virtually in the soul, as in their principle or root. (Aquinas, ST I, Q77, a8)

Now nothing corporeal can make and impression on the incorporeal. And therefore in order to cause an intellectual act, according to Aristotle, the impression caused by the sensible is not enough, but something more noble is required, because what acts is more noble than what is passive…the higher and more noble agent which [Aristotle] calls the active intellect…causes the phantasms received from the senses to be actually intelligible, by a process of abstraction. (Aquinas, ST I, Q84, a6)
I.C. The Real Shift is not Hylomorphism ➞ Dualism but the Death of the Soul
You conclude: ‘I am, then, in the strict sense a thing that thinks; that is, I am a mind, or intelligence, or intellect, or reason.’ Here I must admit that I had been laboring under a misapprehension. I thought that I was addressing a human soul, or the internal principle by which a man lives, has sensations, moves around and understands. Instead I find I was addressing a mind alone, which has divested itself not just of the body but also of the very soul...I ought to have remembered this from the discussion in your Discourse on the Method, where you seemed to want to say that all the functions which are attributed to the vegetative and sensitive soul do not depend on the rational soul but can be exercised before the rational soul arrives in the body, as is the case with the brutes...How I forgot this I do not know, unless it was because I was still in doubt about whether you preferred not to use the word ‘soul’ to apply to the principle responsible for the vegetative and sensory functions in both us and the brutes, but wanted instead to say that the soul in the strict sense was our mind. But since it is the vegetative and sensitive principle that is properly speaking said to ‘animate’ us, the only function performed by the mind is to enable us to think—and this you do in fact assert. Since this is so, let us use the term ‘mind’, and let it be strictly a ‘thinking thing’. (Fifth Objections, AT VII 263)

The next question you raise concerns the obscurity arising from the ambiguity in the word ‘soul’. But I took such care to eliminate this ambiguity when it arose that it is tiresome to repeat myself here. I shall say only that it is generally the ignorant who have given things their names, and so the names do not always fit the things with sufficient accuracy. Our job, however, is not to change the names after they have been adopted into ordinary usage; we may merely emend their meanings when we notice that they are misunderstood by others. Thus, primitive man probably did not distinguish between, on the one hand, the principle by which we are nourished and grow and accomplish without any thought all the other operations which we have in common with the brutes, and on the other hand, the principle in virtue of which we think. He therefore used the single term ‘soul’ to apply to both; and when he subsequently noticed that thought was distinct from nutrition, he called the element which thinks ‘mind’, and believed it to be the principal part of the soul. I, by contrast, realizing that the principle by which we are nourished is wholly different—different in kind—from that in virtue of which we think, have said that the term ‘soul’, when it is used to refer to both these principles, is ambiguous. If we are to take ‘soul’ in its special sense, as meaning the ‘first actuality’ or ‘principal form of man’, then the term must be understood to apply only to the principle in virtue of which we think; and to avoid ambiguity I have as far as possible used the term ‘mind’ for this. For I consider the mind not as a part of the soul but as the thinking soul in its entirely. (Fifth Replies, VII 355-356)

II. Body and Life
II.A. Preliminaries
I believe that we would have been able to find many very reliable rules, both for curing illness and for preventing it, and even for slowing down the ageing process, if only we had spent enough effort on getting to know the nature of our body, instead of attributing to the soul functions which depend solely on the body and on the disposition of its organs. (Description AT XI 223-224).

White hairs are rapidly appearing on my head, which brings it home to me that the only thing I should be devoting myself to is ways of slowing down their growth. (to Huygens, 5 October 1637, AT I 434)

[My little treatise] will be a little fuller than I had intended, for I have undertaken to explain all the main functions in man; I have already written of the vital functions, such as the digestion of food, the heart beat, the distribution of nourishment, etc., and the five senses. I am now dissecting the heads of various animals, so that I can explain what imagination, memory, etc., consist in. (to Mersenne, November or December 1632, AT I 263)
II.B. The Target View and Response

So long as a man is living he performs very many tasks that he will not perform after death; this certainly demonstrates that the body itself does not constitute the efficient cause of these functions, but there is something in the living body that makes it more excellent and powerful than a dead one, and able to gather itself for performing tasks...There is therefore in us a permanent cause of the actions of life; when it is there, life and every action go on, and when it departs, life ends and is dispersed at that time...this is what everyone declares the soul is: it is the origin and cause of the functions of the living body...anything that endows [the organic body] with life and evokes vital activity should be considered the soul. (Fernel 1567, Book 5, ch. 1)

[It is an error to suppose that] since dead bodies are devoid of heat and movement, it is the absence of the soul that causes this cessation of movement and heat. Thus it has been believed, without justification, that our natural heat and all the movements of our bodies depend on the soul; whereas we ought to hold, on the contrary, that the soul takes its leave when we die only because this heat ceases and the organs which bring about bodily movement decay....So as to avoid this error, let us note that death never occurs through the absence of the soul, but only because one of the principal parts of the body decays. (Passions 1.5-6, AT XI 330)

[A]lthough all these movements cease in a corpse, once the soul has quit the body, we must not infer that it is the soul that produces them; the only inference we can make is that it is one and the same cause that both makes the body unfitted to produce these movements and makes the soul leave the body. (Description, AT XI 225)

Since childhood, however, we have all found by experience that many bodily movements occur in obedience to the will, which is one of the faculties of the soul, and this has led us to believe that the soul is the principle responsible for all bodily movement. Our ignorance of anatomy and mechanics has also played a major role here. For in restricting our consideration to the outside of the human body, we have never imagined that it has within it enough organs or mechanisms to move of its own accord in all the different ways that we observe. Our error was reinforced by our belief that no movement occurs inside a corpse, though it posses the same organs as a living body, and lacks only a soul.

But when we try to get to know our nature more distinctly we can see that our soul, insofar as it is a substance which is distinct from the body, is known to us merely through the fact that it thinks, that is to say, understand, wills, imagines, remembers and has sensory perceptions. The other functions which some people attribute to the soul, such as moving the heart and the arteries, digesting food in the stomach and so on, do not involve any thought, and are simply bodily movements; further, it is more common or a body to be moved by another body than for it to be moved by a soul. Hence, we have less reason to attribute such functions to the soul than to the body. (Description, AT XI 224-225)

We can also observe that when some part of our body is harmed, for example when a nerve is irritated, the result is that the part in question ceases to obey our will as it normally does, and sometimes is subject to convulsive movements despite our wishes. This shows that the soul cannot produce any movement in the body without the appropriate disposition of the bodily organs that are required for making the movement. (Description, AT XI 225)

On the contrary, when all the bodily organs are appropriately disposed for some movement, the body has no need of the soul in order to produce the movement; and, as a result, all the movements which we in no way experience as depending on our thought must be attributed not to the soul, but simply to the disposition of the organs. Even the movements which we call ‘voluntary’ occur principally as a result of this disposition of the organs, since, although it is the soul that determines the
movements, they cannot be produced without the requisite disposition of the organs, no matter how much we may will this to happen.  *(Description, AT XI 225)*.

**II.C. Re-conceiving Body**

[Extension in length, depth, and breadth constitute the nature of corporeal substance…everything else that can be attributed to body presupposes extension and is only a certain mode of an extended thing” *(Principles I.53, AT VIII-A 25)*.

I recognize no other matter in corporeal things apart from that indefinitely divisible, figurable, and mobile matter which the geometers call quantity, and which they take as the object of their demonstrations.  And I consider in that matter absolutely nothing beyond these divisions, shapes, and motions.  *(Principles II.64, AT VIII-A 78-79; see also II.4, AT VIII-A 42, II.19, AT VIII-A 51, and IV.203, AT VIII-A 326)*

Now since we are taking the liberty of making up this [new] matter according to our fancy, let’s attribute to it, if you please, a nature in which there is nothing at all that anyone cannot know as perfectly as possible.  And to that end, let’s expressly assume that it does not have the form of Earth, Fire, Air, or any other particular form such as of wood, or stone or metal, nor the qualities of being hot or cold, dry or humid, light or heavy, or of having some taste, or odor, or sound, or color, or light, or other such quality, in the nature of which one could say that there is something that is not known clearly by everyone…Let’s conceive it as a real, perfectly solid body, which uniformly fills the entire length, breadth, and depth of this great space in the middle of which we have suspended our thought….Let us add further that this matter may be divided into as many parts and shapes as we can imagine, and that each of its parts can take on as many motions as we can conceive.  *(Le Monde, AT XI 33)*.

**II.D. Re-conceiving Life as a Corporeal Principle**

**II.D.1. Classification: Living vs Nonliving Things**

Does Make a Distinction

We must bear in mind that the parts of those living bodies that are maintained through nourishment, that is, animals and plants, undergo continual change… *(Description XI: 247; italics added)*

I would not add anything further to this fourth part of the *Principles of Philosophy* if, as I originally planned, I was going on to write two further parts—a fifth part on living things, i.e. animals and plants, and a sixth part on man.  But I am not yet completely clear about all the matters that I would like to deal with there, and I do not know whether I shall ever have enough free time to complete these sections.  So, to avoid delaying the publication of the first four parts any longer, and to make sure there are no gaps caused by my keeping material back for the two final parts, I shall here add a few observations concerning the objects of the senses.  *(Principles IV.188, AT VIII-A 315)*

**Self-Motion**

You seem to make a greater difference between living and lifeless things than there is between a clock or other automaton on the one hand, and a key or sword or other non-self-moving appliance on the other.  I do not agree.  Since ‘self-moving’ is a category with respect to all machines that move of their own accord, which excludes others that are not self-moving, so ‘life’ may be taken as a category which includes the forms of all living things… *(to Regius, June 1642, AT III 566, italics mine)*

The difference between the body of a living man and that of a dead man is just like the difference between, on the one hand, a watch or other automaton when it is wound up and contains in itself the corporeal principle of the movements for which it is designed…and, on the other hand, the same watch or machine when it is broken and the principle of its movement ceases to be active.  *(Passions I.6, AT XI 331, italics mine)*
Micromechanisms
No one who uses his reason will, I think, deny the advantage of using what happens in large bodies, as perceived by our senses, as a model for our ideas about what happens in tiny bodies that elude our senses merely because of their small size. This is much better than explaining matters by inventing all sorts of strange objects which have no resemblance to what is perceived by the senses such as ‘prime matter’, ‘substantial forms’ and the whole range of qualities that people habitually introduce, all of which are harder to understand then the things they are supposed to explain. (Principles IV.201, AT VIII-A 324-325)

I took the simplest and best known principles, knowledge of which is naturally implanted in our minds; and working from these I considered, in general terms, firstly, what are the principal differences that can exist between the sizes, shapes and positions of bodies which are imperceptible by the senses merely because of their small size, and secondly, what observable effects would result from their various interactions. Later on, when I observed just such effects in objects that can be perceived by the senses, I judged that they in fact arose from just such an interaction of bodies that cannot be perceived—especially since it seemed impossible to think up any other explanation for them. In this matter I was greatly helped by considering artifacts. For I do not recognize any difference [nb: I’d read explanatory difference] between artifacts and natural bodies except that the operations of artifacts are for the most part performed by mechanisms that are large enough to be easily perceivable by the senses—as indeed they must be if they are to be capable of being manufactured by human beings. The effects produced in nature, by contrast, almost always depend on structures that are so minute that they completely elude our senses. (Principles IV. 203, AT VIII-A 326)

Complexity and Ingenuity
We see clocks, artificial fountains, mills, and other such machines that, although only man-made, have the power to move of their own accord in many different ways. But I am supposing this machine to be made by the hand of God, and so I think you may reasonably think it capable of a greater variety of movements than I could possibly imagine in it, and of exhibiting more artistry than I could possible ascribe to it. (Treatise, AT XI 120).

This will not seem strange to those who know how many kinds of automata, or moving machines, the skill of man can construct with the use of very few parts, in comparison with the great multitude of bones, muscles, nerves, arteries, veins and all the other parts that are in the body of any animal. For they will regard this [animal] body as a machine that, having been made by the hands of God, is incomparably better ordered than any machine that can be devised by man [and exhibit movements] more wonderful than those in any such [man-made] machine. (Discourse 5, AT VI 56, italics added)

Suppose that a man had been brought up all his life in some place where he had never seen any animals except men; and suppose that he was very devoted to the stud of mechanics, and had made, or helped to make, various automatons shaped like a man, a horse, a dog, a bird, and so on, which walked and ate, and breathed, and so far as possible imitated all the other actions of the animals they resembled, including the signs we use to express our passions, like crying when struck and running away when subject to a loud noise…Now, I say, you must consider what would be he judgment of such a man when he saw the animals we have; especially if he was filled with the knowledge of God, or at least had noticed how inferior is the best skill shown by men in their artefacts when compared with that shown by nature in the composition of plants. Nature has packed plants with an infinity of tiny invisible ducts through which certain juices gradually ascend to the ends of the branches, where they intermingle and combine and dry out in such a way as to form leaves and flowers and fruits. Let us suppose that our man had noticed this, and so believed firmly that if there are automatons made by God or nature to imitate our actions, they would imitate them more perfectly, and be incomparably more skilfully constructed than any which could be invented by men. Now suppose
that this man were to see the animal…There is no doubt that he would…think they were automatons, which, being made by nature, were incomparably more accomplished than any of those he had previously made himself. (to Reneri for Pollot, April or May 1638)

*Life functions: generation, growth, nutrition, self-maintenance, response to environment*

We should bear in mind that the parts of all living bodies which require nutrition to sustain them (that is, animals and plants) are continually undergoing change. (*Description* AT XI, 247).

*The human* body is a unity which is in a sense indivisible because of the arrangement of its organs, these being so related to one another that the removal of any one of them renders the whole body defective. (*Passions* I.30, AT XI 351)

Suppose, firstly, that the tiny fibers which make up the marrow of the nerves are pulled with such force that they are broken and separated from the part of the body to which they are joined, with the result that the structure of the whole machine becomes somehow less perfect…Now suppose the fibers are pulled with a force almost as great as the one just mentioned, but without their being broken or separated from the parts to which they are attached. Then they will cause a movement in the brain, which, testifies] to the good condition of the other parts of the body… (*Treatise* AT XI 143-144)

**II.D.2. Explanation**

**II.D.2.a. Bloodflow driven by Cardiac Heat**

Wherefore it is not necessary...to conceive of any vegetative or sensitive soul or any other principle of movement and life than its blood and its spirits, agitated by the heat of the fire which burns continually in its heart and which is of no other nature than all those fires that occur in inanimate bodies. (*Treatise*, AT XI 202; see also AT XI 123ff.)

The souls of animals are nothing but their blood, the blood which is turned into spirits by the warmth of the heart and travels through the arteries to the brain and from it to the nerves and muscles. (*to Plentipius for Fromondus*, 3 October 1637, AT I 414)

I will say here that the heat in the heart is like the great spring or principle responsible for all the movements occurring in the machine. The veins are pipes which conduct the blood from all the parts of the body towards the heart, where it serve to fuel the heat there….The arteries are yet another set of pipes through which the blood, which is heated and rarified in the heart, passes from there into all the other parts of the body, bringing them heat and material to nourish them. (*Description*, AT XI 226-227)

It is not commonly known how these animal spirits and nerves help to produce movements and sensations, or what corporeal principle makes them act. That is why, although I have already touched upon this question in other writings, I intend to speak briefly about it here. While we are alive there is a continual heat in our hearts, which is a kind of fire that the blood of the veins maintains there. This fire is the corporeal principle underlying all the movements of our limbs. (*Passions* I.8, AT XI 333)

I do not deny life to animals, since I regard it as consisting simply in the heat of the heart. (*to More*, 5 February 1649, AT V 278)

I do not see how those who credit animals with some sort of substantial soul distinct from blood, heat and spirits can answer such Scripture texts as Leviticus 17:14 (‘The soul of all flesh is in its blood, and you shall not eat the blood of any flesh, because the soul of flesh is in its blood’) and Deuteronomy 12:23 (‘Only take care not to eat their blood for their blood is their soul, and you must not eat their soul with their flesh’). (*to Fromondus*, AT I 414-415).
II.E. Mechanizing the Sensitive Soul

I expressly referred nutrition to the body alone; and as for movement and sensation, I refer them to the body for the most part, and attribute nothing belonging to them to the soul, apart from the element of thought alone. (*Fifth Replies*, AT VII 351)

[M]y view is that animals do not see as we do when we are aware that we see, but only as we do when our mind is elsewhere. In such a case the images of external objects are depicted on our retinas, and perhaps the impressions they make in the optic nerves cause our limbs to make various movements, although we are quite unaware of them. In such a case we too move just like automatons, and nobody thinks that the force of heat is insufficient to cause their movements. (*letter to Fromondus*, AT I 413-414)

It often happens that we walk or eat without thinking at all about what we are doing; and similarly, without using our reason, we reject things that are harmful for us, and parry the blows aimed at us. Indeed even if we expressly willed not to put our hands in front of our head when we fall, we could not prevent ourselves. I consider also that if we had no thought then we would walk, as the animals do, without having learnt to, and it is said that those who walk in their sleep sometimes swim across streams in which they would drown if they were awake. As for the movements of our passions, even though in us they are accompanied by thought because we have the faculty of thinking, it is nevertheless very clear that they do not depend on thought, because they often occur in spite of us. Consequently they can also occur in animals, even more violently than they do in human beings, without our being able to conclude from that that animals have thoughts. (*to the Marquess of Newcastle*, 23 November 1646, AT IV 573)

The same impression that the presence of a terrifying object forms on the gland, and which causes fear in some people, may excite courage and boldness in others. The reason for this is that brains are not all constituted in the same way. Thus the very same movement of the gland which in some excites fear, in others causes the spirits to enter the pores of the brain that direct them partly into nerves that serve to move the hands in self-defense and partly into those that agitate the blood and drive it toward the heart in a manner required to produce spirits appropriate for continuing this defense and for maintaining the will to do so. (*Passions* I.39, AT XI 358-359)

I desire you to consider...that all the functions that I have attributed to this machine [a machine that resembles the human body in every way], such as the digestion of food, the beating of the heart and arteries, the nourishment and growth of the members, respiration, waking and sleeping, the reception by the external sense organs of light, sounds, smells, taste, heat, and all other such qualities, the imprinting of the ideas [corporeal impressions on the PG] of these qualities in the organ of common sense and imagination, the retention or imprint of these ideas in the memory, the internal movements of the appetites and passions, and finally the external movements of all the members that so properly follow both the actions of objects presented to the sense and the passions and impressions which are entailed in the memory—I desire you to consider, I say, that these functions imitate those of a real man as perfectly as possible and that they follow naturally in this machine entirely from the disposition of the organs—no more nor less than do the movements of a clock or other automaton, from the arrangement of its counterweights and wheels. Wherefore it is not necessary, on their account, to conceive of any vegetative or sensitive soul or any other principle of movement and life than its blood and its spirits, agitated by the heat of the fire which burns continually in its heart and which is of no other nature than all those fires that occur in inanimate bodies. (*Treatise* AT XI 201-202)
DAY 2: Aristotelian Soul ➔ Cartesian Mind

“Having thus considered all the functions belonging to the body, it is easy to recognize that there is nothing in us which we must attribute to our soul except our thoughts” (Passions I.17, AT XI 342).

III. Soul or Mind

III.A. neoAristotelian recap

Something is actually understood because it is immaterial, not because it is universal; rather a universal is intelligible because it is abstracted from individuating material principles. (Quaestiones de Anima Q2, r5)

Sense has singular and individual things for its object, and intellect has the universal for its object. (ST I Q85, a3)

A human soul does not possess innate intelligible species by means of which it can accomplish its essential operation, which is to understand, as higher intellectual substances do; but rather a human soul is in potency to intelligible species since it is like a wax tablet on which nothing has been written, as it is said in Book II of the De Anima. Consequently it must acquire intelligible species from things outside itself through the mediation of sense faculties, which cannot accomplish their appropriate operations without bodily organs. Hence it is necessary that a human soul be united to a body. (Quaestiones de Anima A8)

III.B. The Cartesian Amputation: Soul becomes Mind

[What attributes can I be sure belong to me in this condition of hyperbolic doubt?] What about the attributes I assigned to the soul? To be nourished or walk around? Since now I do not have a body, these are mere fabrications. To sense? This surely does not occur without a body, and I have seemed to sense many things in dreams that I later realized were not sensed. To think [cogitare]? At last I have discovered it: thought. This alone is inseparable from me... I am, then, in the strict sense, only a thinking thing; that is, a mind [mens] or intelligence [animus] or intellect [intellectus] or reason [ratio], words whose meaning I have been ignorant of until now. But for all that I am a thing that is real and that truly exists. But what kind of thing? As I have just said, a thinking thing. (Meditations AT VII 27)

The first thing that I cannot approve is your saying that ‘men have a threefold soul’. In my religion this is a heretical thing to say; and quite apart from religion, it goes against logic to conceive the soul as a genus whose species are the mind, the vegetative power and the locomotive power of animals. When you speak of the sensory soul you can only mean the locomotive power, unless you are confusing it with the rational soul; but this locomotive power is not even of a different species from the vegetative power, and it belongs to a totally different genus from the mind. But since there is no real disagreement between us, I will tell you how I would explain the matter.

There is only one soul in human beings, the rational soul, for no actions can be reckoned human unless they depend on reason. The vegetative power and the power of moving the body, which are called the vegetative and sensory souls in plants and animals, exist also in human beings; but in the case of human beings they should not be called souls, because they are not the first principles of their actions, and they belong to a totally different genus from the rational soul.

The vegetative power in human beings is nothing but a certain arrangement of the parts of the body which, etc.

A little further on: The sensory power, etc.

Then: So these two are simple, in the human body, etc.

Then: And since the mind, or rational soul, is distinct form body, it is with good reason that it alone is called soul. (to Regius, AT III 371-372)
I recognize only two ultimate classes of things: first, intellectual \([\text{intellectualium}]\) or thinking things, i.e. things pertaining to the mind or thinking substance; and secondly, material things, i.e., those that pertain to extended substance or body. \((\text{Principles I.48, AT VIII-A 23})\)

Thought and extension can be regarded as constituting the natures of intelligent \([\text{intelligentis}]\) substance and corporeal substance. \((\text{Principles I.63, AT VIII-A 30})\)

III.C. The Cartesian Reconstructive Surgery: Mind becomes Cartesian Mind

But what then am I? A thinking thing. What is that? Truly, a doubting, understanding \([\text{intelligens}]\), affirming, denying, willing, nilling, and also \([\text{quoque}]\) imagining and sensing thing. \((\text{M2, AT VII 28, italics mine})\)

I am a thinking thing, that is a thing doubting, affirming, denying, understanding a few things, being ignorant of many things, willing, nilling, and also \([\text{etiam}]\) imagining and sensing. \((\text{M3, AT VII 34, italics mine})\)

You argue that if the nature of man is solely to think, then he has no will. I do not see that this follows: for willing, understanding, imagining, and sensing and so on are just different ways of thinking, and all belong to the soul. \((\text{to Mersenne, End of May 1637, AT I 366})\)

To think is not only the same as to understand \([\text{intelligere}]\), to will, to imagine, but also to sense. \((\text{Principles I.9, AT VIII-A 7})\)

All the modes of thinking that we experience within ourselves can be referred to two general categories: one of which is perception, or the operation of the intellect, and volition, or the operation of the will. For to sense, to imagine and to purely understand are simply different modes of perceiving; to desire, to be averse to, to affirm, to deny and to doubt are different modes of willing. \((\text{Principles I.32, AT VIII-A 17})\)

But when we try to get to know our nature more distinctly we can see that our soul, insofar as it is a substance which is distinct from the body, is known to us merely through the fact that it thinks, that is to say, understand, wills, imagines, remembers and senses; for all these functions are kinds of thought. \((\text{Description, AT XI 224})\)

There are other acts which we call `acts of thought`, such as understanding, willing, imagining, sensing, and so on: these all fall under the common concept of thought or perception of consciousness, and we call the substance in which they inhere a `thinking thing` or a `mind`. \((\text{R3, AT VII 176})\)

Which of these activities can be separated from myself? The fact that it is I who am doubting and understanding and willing is so manifest that I see no way of making it any clearer. But truly \(\text{it also is the same I who imagines}\). For although perhaps, as I have supposed, none of the things imagined are true, the power of imagining itself really exists and is part of my thinking. Finally, \(\text{I am the same one who senses,}\) or who notices bodily things as if through the senses, viz., I am now see light, hear a noise, feel heat. These things are false, for I am sleeping. But I certainly seem to see, to hear, to be warmed \([\text{At certe videre video, audire, calescere}]\). This cannot be false. It is this in me that is properly called “to sense”; and taken in this precise sense, it is nothing other than to think \([\text{hoc est proprie quod in me sentire appellatur; atque hoc praevis sic sumptum nihil aliud quam cogitare}]\). \((\text{M2, AT VII 29, italics mine})\)

\textbf{Nip}

I do not explain the feeling of pain \([\text{sentiment de la douleur}]\) without the soul, because, according to me, pain is only in the understanding \([\text{dans l’entendement}]\); but I explain all the external movements that
accompany this feeling in us, which is all that are found in animals and not pain properly so called [proprement dites]. (to Mersenne, 11 June 1640, AT III 85)

The sense in which I include imaginations in the definition of cogitation or thought differs from the sense in which I exclude them. The corporeal forms or species that must be in the brain for us to imagine anything are not thoughts; but the operation of the mind imagining or turning itself toward those species, is thought. (to Mersenne, 21 April 1641, AT III 361).

As for movement and sensation, I refer them to the body for the most part, and attribute nothing belonging to them to the soul, apart from the element of thought alone. (R5, AT VII 351; see also the grades of sense in R6)

Concerning pages 46 and 47 [of the Discourse], [Fromondus] comments that noble actions like sight cannot result from so ignoble and brutish a cause as heat. He supposes that I think that animals see just as we do, i.e., sensing or cognizing his seeing [sentiendo sive cogitando se videre], which is said to have been Epicurus’ view and is still almost universal. But in the whole of that part up to page 60 I explain quite explicitly that my view is that animals do not see as we do when we sense that we see, but only as we do when our mind is elsewhere. In such a case the images of external objects are depicted on our retinas, and perhaps the impressions they make in the optic nerves cause our limbs to make various movements, though we sense nothing of them. In such a case we move just like automatons, and nobody thinks that the force of heat is insufficient to cause their movements. (To Pelopius for Fromondus, 3 October 1637, AT I 413-414).

Tuck (sews sensation and imagination onto the soul/mind)
See passages above.

**Target Question: Take 1**

René Descartes [this is how Balz identifies the meditator] now must make a critical decision. It is one fraught with incalculable consequences for modernity. If the experiential accruals…must be referred to the unextended immaterial substance, then the essential constitutive attribute of that substance cannot be what the amanuensis of Cartesius had believed it to be!...The dilemma is apparent; either sense, passion, memory, imagination must be excluded from that substance, or else the essence of that substance is not the intellect and is not uniquely defined by intellection. (Balz, Descartes and the Modern Mind, 244).

Each substance has one principal property which constitutes its nature and essence, and to which all its other properties are referred…thought constitutes the nature of thinking substance…whatever we find in the mind is simply one of the various modes of thinking. (Principles I.53, AT VIII-A 25)

**Malpractice: sensing and imagining are imperfectly grafted onto the mind**

I consider that this power of imagining which is in me, differing as it does from the power of understanding, is not a necessary constituent of my own essence, that is, of the essence of my mind. For if I lacked it, I should undoubtedly remain the same individual as I now am; from which it seems to follow that it depends on something distinct from myself. (M6, AT II 73, italics mine)

Besides this, I find in myself faculties for certain special modes of thinking, namely imagination and sensation. Now I can clearly and distinctly understand myself as a whole without these faculties, but I cannot, conversely understand these faculties without me, that is with an intelligent substance to inhere in. (M6, AT VII 78, italics mine)

I do not see any difficulty in understanding on the one hand that the faculties of imagination and sensation belong to the soul, because they are species of thoughts, and on the other hand that they
belong to the soul only insofar as it is joined to the body, because they are kinds of thoughts without which one can conceive the soul in all its purity. (To Gibieuf, 19 January 1642, AT III 479, italics mine)

The mind is aware that these sensations do not come from itself alone, and that they cannot belong to it simply in virtue of its being a thinking thing, instead, they can belong to it only in virtue of its being joined to something other than itself which is extended and moveable, namely what we call the human body. (Principles II.2, AT VIII-A 41, italics mine)

[S]ensations 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. For if an angel were in a human body, he would not have sensations as we do, but would simply perceive the motions which are caused by external objects, and in this way would differ from a real man. (to Regius, January 1642, AT III 493, italics mine)

These sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body. (M6, AT VII 81, italics mine)

The perceptions of pain, pleasure, thirst, hunger, color, sound, taste, smell, heat, cold and the like... arise from the union and as it were the intermingling of mind and body. (R6, AT VII 437, italics mine)

We also experience within ourselves certain other things that must not be referred either to the mind alone or to the body alone. These arise... from the close and intimate union of our mind with the body. This list includes, first, appetites like hunger and thirst; secondly, the emotions or passions of the mind which do not consist of thought alone, such as the emotions of anger, joy, sadness, and love; and finally, all the sensations, such as those of pain, pleasure, light, colors, sounds, smells, tastes, heat, hardness and other tactile qualities. (Principles I.48, AT VIII-A 23, italics mine)

If one may conjecture on such an unexplored topic, it seems most reasonable to think that a mind newly united to an infant’s body is wholly occupied in perceiving in a confused way or feeling the ideas of pain, pleasure, heat, cold and other similar ideas which arise from its union and as it were intermingling with the body. (letter to Hyperaspistes, August 1641, AT III 424, italics mine)

I will first examine the difference between imagination and pure understanding. When I imagine a triangle, for example, I do not merely understand that it is a figure bounded by three lines, but at the same time I also see the three lines with my mind’s eye as if they were present before me; and this is what I call imagining. But if I want to think of a chiliagon, although I understand that it is a figure consisting of a thousand sides just as well as I understand the triangle to be a three-sided figure, I do not in the same way imagine the thousand sides or see them as if they were present before me. It is true that since I am in the habit of imagining something whenever I think of a corporeal thing may construct in my mind a confused representation of some figure; but it is clear that this is not a chiliagon. For it different in no way from the representation I should form if I were thinking of a myriagon, or any figure with very many sides. Moreover, such a representation is useless for recognizing the properties which distinguish a chiliagon from other polygons. But suppose I am dealing with a pentagon: I can of course understand the figure of a pentagon, just as I can the figure of a chiliagon, without the help of the imagination; but I can also imagine a pentagon, by applying my mind’s eye to its five sides and the area contained within them. And in doing this I notice quite clearly that imagination requires a peculiar effort of mind which is not required for understanding; this additional effort of mind clearly shows the difference between imagination and pure understanding. (M6, AT VII 72-73).

It is false that our understanding of a chiliagon is confused; for many properties can be very clearly and very distinctly demonstrated of it, which could certainly not happen if we perceived it only in a confused manner, or, as you claim, only in a verbal way. In fact we have a clear understanding of the
whole figure, even though we cannot imagine it in its entirety all at once. And it is clear from this that the powers of understanding and imagining do not differ merely in degree but are two quite different kinds of mental operation. For in understanding the mind employs only itself, while in imagination it contemplates a corporeal form. (R5, AT VII 584-585).

[H]e says [ideas in the imagination] are expressed by terms and [ideas in the mind] by propositions. It is not whether they are expressed by terms or by propositions which makes them belong to the mind or the imagination; they can both be expressed in either way. It is the manner of conceiving them that makes the difference: whatever we conceive without an image is an idea of the pure mind, and whatever we conceive with an image is an idea of the imagination. As our imagination is tightly and narrowly limited, while our mind has hardly any limits, there are very few things, even corporeal things, which we can imagine, even though we are capable of conceiving them. (to Mersenne July 1641, AT III 392, italics mine)

The mind does not receive any corporeal semblance; the pure understanding both of corporeal and incorporeal things occurs without any corporeal semblance. In the case of imagination, however, which can have only corporeal things as its object, we do indeed require a semblance which is a real body: the mind applies itself to this semblance but does not receive it. (R5, AT VII 387)

[I]n enumerating the forms of perception, [Regius] lists only sense-perception, memory, and imagination. We may gather from this that he does not admit any pure understanding, i.e. understanding which is not concerned with any corporeal images, and hence that his view is that we have no knowledge of God, or of the human mind, or of other incorporeal things. The only explanation for this that I can think of is that what thoughts he has on this matter are so confused that he is never aware of having a pure thought, a thought which is quite distinct from any corporeal image. (Comments AT VIII-B 363-364)

III.D. Descartes is no help
So many things are contained in the idea of a thinking thing that it would take whole days to unfold them. (Search, AT X 424)

[The matter is] so self-evident that there is nothing which could serve to make it any clearer. (to Hyperaspistes, August 1641, AT III 426)

I would never have believed that there has ever existed anyone so stupid that he had to be told what existence is before being able to conclude and assert that he exists. The same applies to doubt and thought…In order to know what doubt and thought are, all one has to do is doubt or think. That tells us all it is possible to know about them, and explains more about them than even the most precise definitions. (Search, AT X 523-24)

So many things are contained in the idea of a thinking thing that it would take whole days to unfold them. We shall be dealing for the moment only with the most important things, and with those that help to make the notion of a thinking thing more distinct, and which will help us to avoid confusing it with notions which have nothing to do with it. By a ‘thinking thing’ I mean… (Search, AT X 424)

III.E.1. Consciousness

Pro Passages
There are other acts which we call ‘acts of thought’, such as understanding, willing, imagining, having sensory perceptions, and so on: these all fall under the common concept of thought or perception or consciousness, and we call the substance in which they inhere a ‘thinking thing’ or a ‘mind’. We can use any other term you like, provided we do not confuse this substance with corporeal substance. For acts of thought have nothing in common with corporeal acts, and thought, which is the common
concept under which they fall, is different in kind from extension, which is the common concept of corporeal acts. (R3, AT VII 176, italics mine)

I may not…make the inference ‘I am walking, therefore I exist’, except insofar as the awareness [conscientia] of walking is a thought. Only then is the inference certain, and not when applied to the movement of the body which sometimes—in the case of dreams—is not occurring at all, despite the fact that I seem to myself to be walking. Hence from the fact that I think I am walking I can very well infer the existence of a mind that has this thought, but not the existence of a body that walks. (R5, AT VII 352)

By the term “thought” I understand all those things that we are conscious of happening in us insofar as we are conscious of them in us. And so to think, here, is the same not only as to understand, but also to will, to imagine, and even to sense. [Cogitationis nomine, intelligo illa omnia, quae nobis conscii in nobis fiunt, quoten omnis eorum in nobis conscientia est. Atque ita non modo intelligere, velle, imaginari, sed etiam sentire, idem est hic quod cogitare.] (Principles I.9, AT VIII-A 7, italics mine)

The word “thought” includes everything that exists in us in such a way that we are immediately conscious of it. Thus all the operations of the will, the intellect, the imagination and the senses are thoughts. [Cogitationis nomine complector illud omne quod sic in nobis est, ut eius immediate conscius simus. Ita omnes voluntatis, intellectus, imaginationis & sensuum operations sunt contemplationes.] (Second Replies, AT VII 160, italics mine)

I understand thought as that perception, consciousness, or inner knowledge which each one of us experiences directly in ourselves when we are aware of what we do or of what takes place in ourselves. (LaForge, Traité, ch. 3)

I think we can define the nature of thought as that consciousness [conscience], testimony and inner feeling by which the mind is aware of everything it does or suffers and, in general, of everything that takes place immediate in itself at the same time as it acts or is acted on…Thus the substance that thinks is nothing but a being that is aware of everything going on in itself, whether it acts itself or whether something else acts on it, and which is aware of I at exactly the same time as it occurs. (LaForge, Traité, ch. 6)

We have proved above that the nature of the mind is to be a thing that thinks, and we have said that the essence of thought consists in the consciousness and perception that the mind has of everything that takes place in itself. (LaForge, Traité, ch. 9)

III.E.2. Intellection

Moreover, I find in myself faculties for certain special modes of thinking, for example imagining and sensing. I can clearly and distinctly understand myself as a whole without these faculties; but I cannot, conversely, understand them without me, that is, without an intellectual substance to inhere in. For some intellection is included in their formal concept; and so I see that they are distinguished from me as modes are distinguished from a thing. (AT VII 78; also AT VII 27 above, Principles I.48 & 63 above)

These sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body. (M6, AT VII 81)

But cf…

[Sensations are] much more lively and vivid [than intellectual perceptions] and even, in their own way distinct. (M6, AT VII 75, italics mine)
[Something in objects] produces in us a certain very clear and vivid sensation which we call the sensation of color. ([Principles I.70, AT VIII-A 34, italics mine])

We misuse [sensations] by treating them as reliable touchstones for immediate judgments about the essential nature of the bodies located outside us. (M6, AT VII 83)

We easily fall into the error of judging that what is called color in objects is something exactly like the color we sense; and we make the mistake of thinking that we clearly perceive what we do not perceive at all [viz. the true nature of the body in question]. (I.70, AT VIII-A 34)

[T]he perception I have of [the wax] is a case not of vision or touch or imagination—nor has it ever been, despite previous appearances—but of purely mental inspection; and this [purely mental inspection] can be imperfect and confused, as it was before, or clear and distinct as it is now, depending on how carefully I concentrate on what the wax consists in. (AT VII 31)

Although a number of great philosophers before him had discovered the essence of minds to some extent by applying the term intelligences [check] to them, it is certain that (since understanding presupposes the faculty of thinking and does not include all the qualities that belong to the mind) it cannot be said that they showed and taught us completely what is fundamental to its nature. (LaForge, Traité, ch. 6)

III.E.3. (Conscious) Perception of Things
Object of Thought, Intentionality and Representation

[S]ince it is clear that I think, it is also clear that I think of something, because thought is essentially thus. So, since there can be no thought or knowledge without an object known, I can no more ask what is the reason why I think of something, than why I think, since it is impossible to think without thinking of something. (Arnauld, VFI, ch. 3, 9-10)

To see nothing is not to see; to think of nothing is not to think….Properly speaking, this is the first principle of all our knowledge. (Malebranche, Search IV.xi.3)

[T]here can be no ideas which are not as it were of things. (M3, AT VII 44)

[T]he objective mode of being belongs to ideas by their very nature. (M3, AT VII 42)

Some of my thoughts are as it were images of things. [Others involve that plus something else]. (M3, AT VII 37)

[E]very perception is essentially representative of something (VFI, ch. 6, 47)

[A]ll our perceptions are essentially representative modalities. (Arnauld VFI, ch. 5, 37)

[Of ideas,] there is none that does not represent and make us perceive something. (LaForge, Traité, ch. 10, 95)

One can say that [ideas] are the images and pictures of everything that we think about, not only of bodily but also of spiritual things. (LaForge, Traité, ch. 10)

When we say that our ideas and our perceptions (for I take these to be the same thing) represent to us the things that we conceive…this means that the things we conceive are objectively in our mind and in our thought. (Arnauld, VFI, ch. 5, 37)
I say a thing is objectively in my mind when I conceive of it. (Arnauld V/FI ch. 5, 36)

There are hardly any chimeras more arabesque and Spanish than to imagine that the relation that different modifications of our mind (thoughts, loves, desires, pleasures) bear to their objects is not essential to them, and does not enter into their physical entity, but that it is only an extrinsic denigrations that is accessory and accidental to them and of which they can be stripped while they remain the same in their whole physical reality, such that the perception I have of a spider, without changing anything in what it has of physicality and reality, could become the perception of an elephant… I do know that such a view could find some support in the false philosophy of Father Malebranche concerning the ideas: for in spite of everything one has been able to tell him, this proposition is so clear and so certain in itself, that all our perceptions are essentially representative of their objects, has always seemed to him to be a great absurdity. (Arnauld to Bayle, OA XI 61, from Somers)

Manners of Conceiving

By the term ‘idea’ I mean in general everything that is in our mind when we conceive something no matter how we conceive it. (to Mersenne July 1641, AT III 392, italics mine; see also to Elizabeth, 21 May 1643, AT III 666 and 28 June 1643, AT III 691-692 and Comments AT VIII-B 363)

Some of my thoughts are as it were the images of things, and it is only in these cases that the term ‘idea’ is strictly appropriate—for example, when I think of a man, or a chimera, or the sky, or an angel, or God. Other thoughts have various additional forms: thus when I will, or am afraid, or affirm, or deny, there is always a particular thing which I take as the object of my thought, but my thought includes something more than the likeness of that thing. Some thoughts in this category are called volitions or emotions, while others are called judgments. (M3, AT VII 37)

Two sides of same thought-coin

I have said that I take the perception and the idea to be the same thing. Nevertheless it must be noted that this thing, although only one, has two relations: one to the soul which it modifies, the other to the thing perceived insofar as it is objectively in my mind…[Idea and perception] are not two different entities but one and the same modification of our soul, which includes essentially the two relations, because I cannot have a perception which is not at the same time the perception of my mind, as perceiving, and the perception of some thing, as perceived. (Arnauld V/FI, ch. 5, 36-37)

[Ideas] can be considered in two ways: either in themselves, or in relation to the things they represent and make us conceive. When considered in themselves, they can be defined as ‘the forms, modes or ways of thinking of the mind by the immediate perception of which we perceive the thing that they represent to us’…When these ideas are considered, no longer as independent realities but in relation to the object which they cause us to think about, one can say that they are the images and pictures of everything that we think about, not only of bodily but also of spiritual things. (LaForge, Traité, ch. 10)

[All our thoughts or ideas...are called thoughts when considered simply as operations of the mind and are called ideas when one considers that there is none which does not represent and make us perceive something. (LaForge, Traité, ch. 10)

There is an ambiguity in the word ‘idea’. ‘Idea’ can be taken materially, as an operation of the intellect, in which case it cannot be said to be more perfect than me. Alternatively, it can be taken objectively, as the thing represented by that operation; and this thing, even if it is not regarded as...
existing outside the intellect, can still, in virtue of its essence, be more perfect than myself. (Preface to the Meds, AT VII 8)

Insofar as the ideas are simply modes of thought, there is no recognizable inequality among them: they all appear to come from within me in the same fashion. But insofar as different ideas represent different things, it is clear that they differ widely. Undoubtedly, the ideas that represent substances to me amount to something more and, so to speak, contain within themselves more objective reality than the ideas that merely represent modes or accidents. (M3, AT VII 40)

The nature of an idea is such that of itself it requires no formal reality except what it derives from my thought, of which it is a mode. But in order for a given idea to contain such and such objective reality, it must surely derive it from some cause that contains at least as much formal reality as there is objective reality in the idea. For if we suppose that an idea contains something which was not in its cause, it must have got this from nothing; yet the mode of being by which a thing exists objectively in the intellect by way of an idea, imperfect though it may be, is certainly not nothing, and so it cannot come from nothing. (M3, AT VII 41)

An idea is the thing that is thought of insofar as it has objective being in the intellect…‘objective being’ simply means being in the intellect in the way in which objects are normally there…[If] anyone asks what happens to the sun through its being objectively in my intellect, the best answer is that nothing happens to it beyond the application of an extraneous label which does indeed ‘determine an act of the intellect by means of an object.’ But if the question is about what the idea of the sun is, and we answer that it is the thing which is thought of, insofar as it has objective being in the intellect, no one will take this to be the sun itself with this extraneous label applied to it…[it] will signify the object’s being in the intellect in the way in which its objects are normally there. By this I mean that the idea of the sun is the sun itself existing in the intellect—not of course formally existing, as it does in the heavens, but objectively existing, i.e., in the way in which objects normally are in the intellect. Now this mode of being is of course much less perfect than that possess by things that exist outside the intellect; but, as I did explain, it is not therefore simply nothing. (R1, AT VII 102-103).

Ideas are forms of a kind, and are not composed of any matter, when we think of them as representing something we are taking them not materially but formally. If, however, we were considering them not as representing this or that but simply as operations of the intellect, then it could be said that we were taking them materially. (R4, AT VII 232)

Consciousness

Our thought or perception is essentially reflexive on itself [essentiellement reflexissante sur elle meme]; or, as one says more happily in Latin, est conscius sui [is conscious of itself]… Beyond this reflection [réflexion] that one could call virtual, there is another more explicit, in which we examine our perception by another perception. (Arnauld, VTI, ch. 6, 46; see also ch. 2, 11)

I know myself, in knowing all other things…I cannot have a perception that is not at the same time the perception of my mind as perceiving. (Arnauld, ch. 2, 11)

[Cognition] is not the production of an idea that represents, nor its reception in the interior of the soul, but the consciousness or the perception we have of this idea. (LaForge, Traité, ch. 9, 76)

Pros

[Sensation] do not come from itself [the mind] alone, and they cannot belong to [the mind] simply in virtue of its being a thinking thing; instead they can belong to it only in virtue of its being joined to something other than itself which is extended and moveable, namely what we call the human body” (Principles II.2, AT VIII-A 41)
The proper purpose of the sensory perceptions given me by nature is simply to signify to the mind what is beneficial or harmful for the composite of which it is a part. (M6, AT VII 83)

When I examine the different ways of cognizing, the only one I find that I could believe is inseparable from the mind is pure understanding. For there is no other faculty of knowing that does not depend in some way on the body, and yet my concept of mind shows me that it can be separated from the body and that I could easily conceive of it without the body... I think this faculty is more inseparable from the mind than any other the mind needs only itself and its own concepts in order to understand, whereas in order to sense and imagine the body must be affected and prepared in some way by objects or, at least, the mind but turn toward the body. (LaForge, Traité, ch. 8)

Our sense do not always show us external bodies exactly as they are, but only insofar as they are related to us and can benefit or harm us. (to More, 5 February 1649, AT V 271)

Sensory perceptions are related exclusively to this combination of the human body and mind. They normally show us the benefit or harm that external bodies may do to this combination, and do not, except occasionally and accidentally, show us what external bodies are like in themselves. (Principles II.3, AT VIII-A 41-42)

God could have made the nature of man such that this particular motion in the brain [arising typically from an injury to the foot] exhibit something else to the mind [i.e., something other than pain in the foot]; it might, for example, have made the mind aware of the actual motion occurring in the brain, or in the foot, or in any of the intermediate regions; or something else entirely. But nothing else would have been so conducive to the continued well-being of the body. (M6, AT VII 88)

In matters regarding the well-being of the body, all my senses report the truth much more frequently than not. (M6, AT VII 89)