

Descartes
Texts on the Divine Creation of the Eternal Truths
and the Foundations of Physics

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WORK IN PROGRESS

10-31-16

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Correspondence

To Mersenne, 15 April 1630: Eternal truths and divine will.

Your question of theology is beyond my mental capacity, but it does not seem to me outside my province, since it has no concern with anything dependent on revelation, which is what I call theology in the strict sense; it is a metaphysical question which is to be examined by human reason. I think that all those to whom God has given the use of this reason have an obligation to employ it principally in the endeavor to know him and to know themselves. That is the task with which I began my studies; and I can say that I would not have been able to discover the foundations of physics (*les fondemens de la Physique*) if I had not looked for them along that road. It is the topic which I have studied more than any other and in which, thank God, I have not altogether wasted my time. At least I think I have found how to prove metaphysical truths in a manner that is more evident than the proofs of geometry—in my own opinion, that is: I do not know if I shall be able to convince others of it. During my first nine months in this country [Holland] I worked on nothing else. I think that you heard me speak once before of my plan to write something on the topic; but I did not think it opportune to do so before I have seen how my treatise on physics is received. . . . in my treatise on physics I shall discuss a number of metaphysical topics and especially the following. The mathematical truths which you call eternal have been established (*establies*) by God and depend on him entirely no less than the rest of his creatures. Indeed to say that these truths are independent of God is to talk of him as if he were Jupiter or Saturn and to subject him to the Styx and the Fates [Cf. *Le Monde*, Chap. 7, AT XI 47: same laws of nature in any world God creates]. Please do not hesitate to assure and proclaim everywhere that it is God who has established these laws in nature just as a king establishes laws in his kingdom (*que c'est Dieu qui a établi ces lois en la nature, ainsy qu'un Roy establisset des lois en son Royaume*). There is no single one that we cannot grasp if our mind turns to consider it. They are all inborn in our minds (*mentibus nostris ingenitae*) just as a king would imprint (*imprimeroit*) his laws on the hearts of all his subjects if he had enough power to do so. The greatness (*grandeur*; magnitude) of God, on the other hand, is something that we cannot grasp (*comprendre*) even though we know (*connaitre*) it. But the very fact that we judge it beyond our grasp makes us esteem it the more greatly; just as a king has more majesty when he is less familiarly known by his subjects, provided of course that they do not get the idea that they have no king—they must know him enough to be in no doubt about that.

It will be said that if God has established (*avoit établi*) these truths he could change them as a king changes his laws. To this the answer is: Yes he can, if his will can change. —‘But I understand them to be eternal and unchangeable.’ —I make the same judgment about God. —‘But his will is free.’—Yes, but his power is incomprehensible. In general we can assert that God can do everything that we can comprehend but not that he cannot do what we cannot comprehend. It would be rash to think that our imagination reaches as far as his power.

I hope to put this in writing, within the next fortnight, in my treatise on physics; but I do not want you to keep it secret. On the contrary I beg you to tell people as often as the occasion demands, provided you do not mention my name. I should be glad to know the

objections which can be made against this view; and I want people to get used to speaking of God in a manner worthier, I think, than the common and almost universal way of imagining him as a finite being. AT I 144-146; CSMK 22-23

To Mersenne, 6 May 1630: The eternal truths and the identity of divine will and intellect.

Pour les veritez eternelles, ie dis derechef que *sunt tantum verae aut possibiles, quia Deus illas veras aut possibiles cognoscit, non autem contra veras à Deo cognosci quasi independenter ab illo sint verae*. Et si les hommes entendoient bien le sens de leurs paroles, ils ne pourroient iamais dire sans blaspheme, que la verité de quelque chose precede la connoissance que Dieu en a, car en Dieu ce n'est qu'un de vouloir et de connoistre; de sorte que *ex hoc ipso quod aliquid velit, ideò cognoscit, et ideò tantum talis res est vera*. Il ne faut donc pas dire que *si Deus non esset, nihilominus istae veritates essent verae*; car l'existence de Dieu est la premiere at la plus eternelle de toutes les veritez qui peuvent estre, et la seule d'où procedent toutes les autres. Mais ce qui fait qu'il est aisé en cecy de se méprendre, c'est que la plupart des hommes ne considerent pas Dieu comme un estre infini & incomprehensible, & qui est le seul Autheur duquel toutes choses dependent; mais ils s'arrestent aux syllables de son nom, & pensent que c'est assez le connoître, si on sçait que *Dieu* veut dire le mesme que ce qui s'apelle *Deus* en latin, & qui est adoré par les hommes. . . . Ce que vous dites de la production du *Verbe* ne repugne point, ce me semble, à ce que ie dis; mais ie ne veux pas me mesler de la Theologie, l'ay peur mesme que vous ne iugiez que ma Philosophie s'emancipe trop, d'ofer dire son auis touchant des matieres si relevées. AT I 149-50

As for the eternal truths, I say once more that they are true or possible only because God knows them as true or possible. They are not known as true by God in any way that would imply that they are true independently of him. If men really understood the sense of their words they could never say without blasphemy that the truth of anything is prior to the knowledge that God has of it. In God willing and knowing are a single thing in such a way that by the very fact of willing something he knows it and it is only for this reason that such a thing is true [Cf. Augustine, *De Genesi ad Literam*, IV.vii.14]. So we must not say that if God did not exist nevertheless these truths would be true; for the existence of God is the first and the most eternal of all the truths that can be and the one from which alone all others proceed. It is easy to be mistaken about this because most people do not regard God as a being who is infinite and beyond our grasp, the sole author on whom all things depend; they stick at the syllables of his name and think it sufficient knowledge of him to know that 'God' means what is meant by *Deus* in Latin and what is adored by men. . . . What you say about the production of the *Word* does not conflict, I think, with what I say [Cf. John 1:1, and the Nicene Creed: "through Him all things were made"]; but I do not want to involve myself in theology, and I am already afraid that you will think my philosophy too free-thinking for daring to express an opinion on such lofty matters. CSMK 24-25

To Mersenne, 27 May 1630: The freedom of creation and the circle of unequal radii.

You ask me by what kind of causality God established the eternal truths (*in quo genere causae Deus disposuit aeternitas veritates*). I reply: by the same kind of causality (*in eodem genere causae*) as he created all things, that is to say, as their efficient and total cause (*ut efficiens et totalis causa*). For it is certain that he is the author of the essence of created things no less than of their existence; and this essence is nothing other than the eternal truths. I do not conceive them as emanating from God like rays from the sun; but I do know that God is the author of all things and that these truths are certain things and consequently that he is their author. . . . You ask also what necessitated God to create these truths; and I reply that he was free to make it not true that all the radii of the circle are equal—just as free as he was not to create the world. And it is certain that these truths are no more necessarily attached to his essence than are other created things. You ask what God did in order to produce them. I reply that from all eternity he willed and understood them to be, and by that very fact he created them (*ex hoc ipso quod illas ab aeterno esse voluerit et intellexerit, illas creavit*). Or, if you reserve the word created for the existence of things, then he established them and made them (*illas disposuit et fecit*). In God, willing, understanding and creating are all the same thing without one being prior to the other even conceptually (*ne quidem ratione*). AT I 151-53; CSMK 25-26

To Mersenne, 27 May 1638: Space and the eternal truths as created.

2. You ask whether there would be real space, as there is now, if God had created nothing. At first this question seems to be beyond the capacity of the human mind, like infinity, so that it would be unreasonable to discuss it; but in fact I think that it is merely beyond the capacity of our imagination, like the questions of the existence of God and of the human soul. I believe that our intellect can reach the truth of the matter, which is, in my opinion, that not only would there not be any space, but even those truths which are called eternal—as that ‘the whole is greater than its part’—would not be truths if God had not so established, as I think I wrote you once before [on 15 April, 6 May, and 27 May, 1630] . . . AT II 138; CSMK 102-103

To Mesland, 2 May 1644: Augustine, creation of eternal truths, will-intellect identity.

I do not know that I laid it down that God always does what he knows to be the most perfect, and it does not seem to me that a finite mind can judge of that. But I tried to solve the difficulty in question, about the cause of error, on the assumption that God had made the world most perfect, since if one makes the opposite assumption, the difficulty disappears altogether.

I am grateful to you for pointing out the places in St. Augustine which can be used to give authority to my views. Some other friends of mine had already done so, and I am pleased that my thoughts agree with such a great and holy man. For I am not the kind of

person who wants his views to appear novel; on the contrary, I make my views conform with those of others so far as truth permits me.

. . .

I turn to the difficulty of conceiving how it was a free and indifferent thing for God to make it not true that the three angles of a triangle were equal to two right angles, or in general that contradictories could not be true together. It is easy to dispel this difficulty by considering that the power of God cannot have any limits, and that our mind is finite and created of such a nature as to be able to conceive as possible the things which God has wished to be in fact possible, but not be able to conceive as possible things which God could have made possible, but which he has nevertheless wished to make impossible. The first consideration lets us know that God cannot have been determined to make it true that contradictories cannot be true together, and therefore that he could have done the opposite [e.g., make a circle of unequal radii]. The second consideration assures us that even if this be true, we should not try to comprehend it, since our nature is incapable of doing so. And even if God has willed that some truths should be necessary, this does not mean that he willed them necessarily; for it is one thing to will that they be necessary, and quite another to will this necessarily, or to be necessitated to will it. I agree that there are contradictions that are so evident that we cannot put them before our minds without judging them entirely impossible, like the one that you suggest: 'that God might have brought it about that his creatures did not depend on him'. But if we would know the immensity of his power we should not put these thoughts before our minds, nor should we conceive any precedence or priority between his intellect and his will; for the idea which we have of God teaches us that there is in him only a single activity, entirely simple and entirely pure. This is well expressed by the words of St. Augustine: 'Because you see them, they are', etc. [*Quia vides ea, sunt; Confessions, XIII.38; also tu autem vidisti facta ubi vidisti facienda*]; because in God seeing [*videre*] and willing [*velle*] are one and the same thing.

AT IV 113 and 118-119; CSMK 232 and 235

To Arnauld, 29 July 1648: Vacuum, omnipotence, and contradiction.

Secondly, [the difficulty in recognizing the impossibility of a vacuum] arises because we have recourse to the divine power: knowing this to be infinite, we attribute to it an effect without noticing that the effect involves a contradictory conception, that is, is inconceivable by us. But I do not think that we should ever say of anything that it cannot be brought about by God. For since every basis of truth and goodness depends on his omnipotence, I would not dare to say that God cannot make a mountain without a valley, or bring it about that 1 and 2 are not 3. I merely say that he has given me such a mind that I cannot conceive a mountain without a valley, or a sum of 1 and 2 which is not 3; such things involve a contradiction in my conception. I think the same should be said of a space which is wholly empty, or of an extended piece of nothing . . .

AT V 223-4; CSMK 358-59

To More, 5 February 1649: Vacuum, atoms, omnipotence, and contradiction.

. . . you are quite ready to admit that in the natural course of events there is no vacuum; you are concerned about God's power, which you think can take away the contents of a container while preventing its sides from meeting. For my part, I know that my intellect is finite and God's power is infinite, and so I set no limits to it; I consider only what I am capable of perceiving, and what not, and I take great pains that my judgment should accord with my perception. And so I boldly assert that God can do everything that I perceive to be possible, but I am not so bold as to assert the converse, namely that he cannot do what conflicts with my conception of things – I merely say that it involves a contradiction. And so, since I see that it conflicts with my way of conceiving things for all body to be taken out of a container and for there to remain an extension which I conceive in no way differently than I previously conceived the body contained in it, I say that it involves a contradiction that such an extension should remain there after the body has been taken away. I conclude that the sides of the container must come together. This is altogether in accord with my other opinions. For I say elsewhere [*Prin.* II.33] that all motion is in a manner circular, from which it follows that it cannot be distinctly understood that God should remove some body from a container unless we understand at the same time that another body, or the sides of the container, should move into its place by a circular motion.

3. In the same way I say that it involves a contradiction that there should be any atoms that are conceived as extended and at the same time indivisible. Though God might make them such that they could not be divided by any creature, we certainly cannot understand that he might deprive himself of the power of dividing them. Your comparison with things which have been done and cannot be undone is not to the point. For we do not take it as a mark of impotence when someone cannot do something that we do not understand to be possible, but only when he cannot do something that we distinctly perceive to be possible. Now we certainly perceive it to be possible for an atom to be divided, since we suppose it to be extended; and so, if we judge that it cannot be divided by God, we shall judge that God cannot do one of the things that we perceive to be possible. But we do not in the same way perceive it to be possible for what is done to be undone—on the contrary, we perceive it to be altogether impossible, and so it is no defect of power in God not to do it. The case is different with the divisibility of matter. . . .

AT V 272-273; CSMK 363-364

Le Monde (completed 1633, published 1664)

Chapter 6: God has established the laws of nature and imparted motion to matter.

[D]és le premier instant qu'elles sont créées, les unes commencent à se mouvoir d'un costé, les autres d'un autre; les unes plus viste, les autres plus lentement (ou mesme si vous voulez point du tout) et qu'elles continüent par après leur mouvement suivant les loix ordinaires de la Nature. Car Dieu a si merueilleusement estably ces Loix, qu'encore que nous supposions qu'il ne crée rien de plus que ce que j'ay dit, et mesme qu'il ne mette en cecy aucun ordre ny proportion, mais qu'il en compose un cahos le plus confus

et le plus embrouillé que les Poëtes puissent décrire, elles sont suffisantes pour faire que les parties de ce cahos se démêlent d'elles-mesmes, et se disposent en si bon ordre, qu'elles auront la forme d'un Monde tres-parfait, et dans lequel on pourra voir non seulement de la Lumiere, mais aussi toutes les autres choses, tant generales que particulieres, que paroissent dans ce vray Monde. AT XI 34-35; Mahoney, 54.

From the first instant that they [the parts of matter] are created, [God] makes some begin to move in one direction and others in another, some faster and others slower (or indeed, if you wish, not at all); thereafter, he makes them continue their motions according to the ordinary laws of nature. For God has so wondrously established these laws that, even if we suppose that he creates nothing more than what I have said, and even if he does not impose any order or proportion on it but makes of it the most confused and most disordered chaos that the poets could describe, the laws are sufficient to make the parts of that cosmos untangle themselves and arrange themselves in such good order that they will have the form of a most perfect world, in which one will be able to see not only light, but also all the other things, both general and particular, that appear in this true world. Mahoney, 55.

Chapter 7: Divine immutability and the laws of nature.

Mais je ne veux pas differer plus long-temps à vous dire par quel moyen la Nature seule pourra démêler la confusion du Cahos don't j'ay parlé, et quelles sont les Loix que Dieu luy a imposées. . . . Car de cela qu'il continuë ainsi de la conserver, il fuit de necessité qu'il doit y avoir plusieurs changemens en ses parties, lesquels ne pouvant ce me semble estre proprement attribuez à l'action de Dieu, parce qu'elle ne change point, je les attribuë à la Nature; et les regles suivant lesquelles se sont ces changements, je les nomme les Loix de Nature. AT XI 36-37; Mahoney, 58.

But I do not want to delay any longer telling you by what means nature alone could untangle the confusion of the chaos of which I have been speaking, and what the laws are that God has imposed on her. . . . For from that alone (i.e., that [God] continues thus to conserve [matter]) it follows of necessity that there may be many changes in its parts that cannot, it seems to me, be properly attributed to the action of God (because that action does not change) and hence are to be attributed to nature. The rules according to which these changes take place I call the 'laws of nature'. Mahoney, 59.

D'où il fuit de necessité, que dés-lors, en commençant à se mouvoir, elles ont commencé aussi à changer et diversifier leurs mouvemens par la rencontre l'une de l'autre; Et ainsi que si Dieu les conserve par après en la mesme façon qu'il les a creées, il ne les conserve pas au mesme estat; C'est à dire, que Dieu agissant toujours de mesme, et par consequent produisant toujours le mesme effet en substance, il se trouve comme par accident plusieurs diversitez en cet effet. Et il est facile à croire, que Dieu, qui comme chacun doit sçavoir est immuable, agit toujours de mesme façon. AT XI 37; Mahoney, 58-60.

Whence it follows of necessity that from then on, in beginning to move, [the parts of matter] also began to change and diversify their motions by colliding with one another. Thus, if God conserves them thereafter in the same way that he created them, he does not conserve them in the same state. That is to say, with God always acting in the same way and consequently always producing the same effect in substance, there occur, as by accident, many diversities in that effect. And it is easy to believe that God, who, as everyone must know, is immutable, always acts in the same way. Mahoney, 59-61.

La premiere est, Que chaque partie de la matiere en particulier, continuë toujours d'estre en un mesme estat, pendant que la recontre des autres ne la contraint point de le changer. AT XI 38; Mahoney, 60.

The first [law of nature] is that each individual part of matter always continues to remain in the same state unless collision with others constrains it to change that state. Mahoney, 61.

Je suppose pour seconde Regle, Que quand un corps en pousse un autre, il ne scauroit luy donner aucun mouvement qu'il n'en perde en mesme temps autant du sien, ny luy en oster que le sien ne s'augmente d'autant. AT XI 41; Mahoney, 64.

I suppose as a second rule that, when one of these bodies pushes another, it cannot give the other any motion except by losing as much of its own at the same time; nor can it take away from the other body's motion unless its own is increased by as much. Mahoney, 65.

Car quel fondement plus ferme et plus solide pourroit-on trouver pour establir une verité, encore qu'on le voulût choisir à souhait, que de prendre la fermeté mesme, et l'immutabilité qui est en Dieu.

Or est-il que ces deux Regles suivent manifestement de cela seul que Dieu est immuable, et qu'agissant toujours en mesme sorte il produit toujours le mesme effet. Car supposant qu'il a mis certain quantité de mouvemens dans toute la matiere en general dès le premier instant qu'il l'a créée, il faut avoüer qu'il y en conserve toujours autant, ou ne pas croire qu'il agisse toujours en mesme sorte. AT XI 43; Mahoney, 68.

For what more firm and solid foundation could one find to establish a truth (even if one wanted to choose it at will) than to take the very firmness and immutability that is in God?

Now it is the case that these two rules manifestly follow from this alone: that God is immutable and that, acting always in the same way, he always produces the same effect. For, supposing that he placed a certain quantity of motion in all matter at the first instant he created it, one must either avow that he always conserves the same amount of it there or not believe that he always acts in the same way. Mahoney, 69.

J'ajouteray pour la Troisième, Que lors qu'un corps meut, encore que son mouvement se fasse le plus souvent en ligne courbe, et qu'il ne s'en puisse jamais faire aucun qui ne soit en quelque façon circulaire, ainsi qu'il a esté dit cy-dessus, toutesfois chacune de ses

parties en particulier tend toujours à continuer le sien en ligne droite; Et ainsi leur action, c'est à dire l'inclination qu'elles ont à se mouvoir, est differente de leur mouvement.

AT XI 43-44; Mahoney, 70.

I will add as a third [law of nature] that, when a body is moving, even if its motion most often takes place along a curved line and (as has been said above) can never take place along any line that is not in some way circular, nevertheless each of its individual parts tends always to continue its motion along a straight line. And their action, i.e., the inclination they have to move, is different from their motion.

Mahoney, 71.

Cette Regle est appuyée sur le mesme fondement que les deux autres, et ne dépend que de ce que Dieu conserve chaque chose par une action continuë, et par consequent qu'il ne la conserve point telle qu'elle peut avoir esté quelque temps auparavant, mais précisément telle qu'elle est au mesme instant qu'il l'a conserve.

AT XI 44; Mahoney, 70.

This rule rests on the same foundation as the two others and depends only on God's conserving everything by a continuous action and, consequently, on his conserving it not as it may have been some time earlier but precisely as it is at the same instant that he conserves it.

Mahoney, 71.

Donc suivant cette Regle, il faut dire que Dieu seul est l'Autheur de tous les mouvemens qui sont au monde, entant qu'ils sont, et entant qu'ils sont droitz; mais que ce sont les diverses dispositions de la matiere qui les rendent irreguliers et courbez; Ainsi que les Theologiens nous apprennent que Dieu est aussi l'Autheur de toutes nos actions, entant qu'elles sont, et entant qu'elles ont quelque bonté; mais que ce sont les diverses dispositions de nos volonteiz qui les peuvent rendre vicieuses.

AT XI 46-47; Mahoney, 74.

According to [the law of rectilinear tendency], then, one must say that God alone is the author of all the motions in the world, insofar as they exist and insofar as they are straight, but that it is the diverse dispositions of matter that render the motions irregular and curved. So the theologians teach us that God is also the author of all our actions, insofar as they exist and insofar as they have some goodness, but that it is the diverse dispositions of our wills that can render those actions evil.

Mahoney, 75.

Je pourrois mettre encore icy plusieurs regles, pour déterminer en particulier quand et comment et de combien le mouvement de chaque corps peut-estre déetournée, et augmentée ou diminuée, par la recontre des autres; ce qui comprend sommairement tous les effets de la Nature. Mais je me contenteray de vous avertir, qu'outre les trois loix que j'ay expliquées, je n'en veux point supposer d'autres, que celles qui suivent infailliblement de ces veritez eternelles sur qui les Mathematiciens ont accoûtumé d'appuyer leurs plus certaines et plus évidentes demonstrations; Ces veritez, dis-je, suivant lesquelles Dieu mesme nous a enseigné qu'il avoit disposé toutes choses en nombre, en pois, et en mesure; et dont la connoissance est si naturelle à nos Ames, que nous ne sçaurions ne les pas juger infaillibles, lors que nous les concevons distinctement; ny douter que si Dieu

avoir creé plusieurs Mondes, elles ne fussent en tous aussi véritables qu'en celui-cy. De forte que ceux qui sçauront suffisamment examiner les consequences de ces veritez et de nos regles, pourront connoistre les effets par leurs causes; et pour m'expliquer en termes de l'Ecole, pourront avoir des demonstrations *a Priori*, de tout ce qui peut estre produit en ce nouveau Monde.

Et asin qu'il n'y ait point d'exception qui en empesche, nous ajouterons, s'il vous plaist, à nos suppositions, que Dieu n'y fera jamais aucun miracle, et que les Intelligences, ou les Ames raisonnables que nous y pourrons supposer cy-aprés, n'y troubleront en aucune façon le cours ordinaire de la Nature.

AT XI 47-48; Mahoney, 74-76.

I could set out here many additional rules for determining in detail when and how and by how much the motion of each body can be diverted and increased or decreased by colliding with others, something that comprises summarily all the effects of nature. But I shall be content with telling you that, besides the three laws that I have explained, I wish to suppose no others but those that infallibly follow from the eternal truths on which the mathematicians have usually based their most certain and most evident demonstrations; the truths, I say, according to which God himself has taught us that he has disposed all things in number, weight, and measure. The knowledge [of these] is so natural to our souls that we cannot but judge them infallible when we conceive them distinctly, nor doubt that, if God had created many worlds, the laws would be as true in all of them as in this one. Thus, those who can examine sufficiently the consequences of these truths and of our rules will be able to know effects by their causes and, to express myself in the language of the School, will be able to have demonstrations *a priori* of everything that can be produced in that new world.

And so that there will be no exception that impedes this, we will, if you wish, suppose in addition that God will never make any miracle in the new world and that the intelligences, or the rational souls, which we might hereafter suppose to be there, will in no way disturb the ordinary course of nature.

Mahoney, 75-77.

Comment:

Curved motions of the parts of matter arise only indirectly from God, via collisional interactions in the plenum under the three laws of nature. We thus have a realm of secondary causes, beginning with the three laws of nature, accessible to natural human reason, as in, say, Thomas Aquinas.

The particular determinacy of the universe, e.g., there is a solar system, depends on curvilinear motion. Descartes distinguishes large structures, namely, stars, planets, space, each composed of a single pure element (fire, earth, air), from the compound or mixed bodies that emerge only on the surface of planets. For example, water, and then life, form on the surface of earth. Descartes says these mixed bodies arise "as if by accident"—as if outside of God's intention or "authorship." It is striking that curved motions are compared to evil in human actions; God is not "the author" of it, but only of "our actions insofar as . . . they have some goodness." And so God is the author of physical motions in the universe only insofar as they are rectilinear. Therefore, God does not intend, is not the *per se* cause of any of the configurations of matter that involve curved motions of their material parts, e.g., an animal, whose blood circulates. This is not like the Bible, or Augustine, in which this visible order of heaven and earth (with water and living things) is the product of an intention. See *Genesis* I, and Augustine's Question 46.

Again, Descartes compares curved motions of matter to evil in human actions; God is not "the author" of it, but only of "our actions insofar as . . . they have some goodness." Now in the traditional theology, God has *knowledge* of all our actions simply, and so, by Descartes's analogy, there should be

nothing to prevent God from *knowing* the particular, curved trajectories of the parts of matter and all the resulting effects, even if he is not their author, does not directly intend them. God should *know* that his plenum will bring about the mixing of elements involving curved motions of matter, and he should be able to know the particular compositions that result, and how those compound bodies continue to move, e.g., a planet, a comet, a river, a horse, a man. (*Prin.* II.42, on transfer of motion in collisions, is consistent with this.) But what happens if we apply the will-intellect identity principle to the particular order of nature? If God can know only what he wills—and he does not will curved motions any more than evil actions—can he know our world of sun and earth, water, plants, and animals? Would this leave us radically free to work on our natural world as we wish?

Discourse on the Method (French 1637)

Part Five: God's establishment of the laws of nature.

. . . mais aussi que j'ai remarqué certaines lois, que Dieu a tellement établies en la nature, et don't il a imprimé de telles notions en nos âmes, qu'après y avoir fait assez de réflexion, nous saurions douter qu'elles ne soient exactement observées, en tout ce qui est ou qui se fait dans le monde. Puis, en considérant la suite de ces lois, il me semble avoir découvert plusieurs vérités plus utiles et plus importantes que tout ce que j'avais appris auparavant, ou même espéré d'apprendre. AT VI 41

. . . but also, I have noticed certain laws that God has so established in nature, and of which he has imprinted such notions in our minds, that after adequate reflection we cannot doubt that they are exactly observed in everything that exists or occurs in the world. Moreover, by considering what follows from these laws it seems to me that I have discovered many truths more useful and important than anything I had previously learned or even hoped to learn. CSM I 131

Part Five: Creation as conservation.

Toutefois, je ne voulais pas inférer, de toutes ces choses, que ce monde ait été créé in la façon que je proposais; car il est bien plus vraisemblable que, dès le commencement, Dieu l'a rendu tel qu'il devait être. Mais il est certain, et c'est une opinion communément reçue entre les théologiens, que l'action, par laquelle maintenant il le conserve, est toute la même que celle par laquelle il l'a créé; de façon qu'encore qu'il ne lui aurait point donné, au commencement, d'autre forme que celle du chaos, pourvu qu'ayant établi les lois de la nature, il lui prêtât son concours, pour agir ainsi qu'elle a de coutume, on peut croire, sans faire tort au miracle de la création, que par cela seul toutes les choses qui sont purement matérielles auraient pu, avec le temps, s'y rendre telles que nous les voyons à présent. Et leur nature est bien plus aisée à concevoir, lorsqu'on les voit naître peu à peu en cette sorte, que lorsqu'on ne les considère que toutes faites. AT VI 45

Yet I did not wish to infer from all this that our world was created in the way I proposed, for it is much more likely that from the beginning God made it just as it had to be. But it

is certain, and it is an opinion commonly accepted among theologians, that the act by which God now preserves it is just the same as that by which he created it. So, even if in the beginning God had given the world only the form of a chaos, provided that he established the laws of nature and then lent his concurrence to enable nature to operate as it normally does, we may believe without impugning the miracle of creation that by this means alone all purely material things could in the course of time have come to be just as we now see them. And their nature is much easier to conceive if we see them develop gradually in this way than if we consider them only as entirely completed.

CSM I 133-34

Meditations (Latin 1641)

First Meditation: Deception contradicts the goodness of God; PNC holds.

And yet firmly rooted in my mind is the old opinion that there is an omnipotent God who has made me the kind of creature that I am. How do I know that he has not brought it about that . . . I [may] go wrong every time I add two and three or count the sides of a square. . . ? But perhaps God would not have allowed me to be deceived in this way, since he is said to be supremely good. But if it would contradict his goodness (*si hoc ejus bonitati repugnaret*) to have created me such that I am deceived all the time, it would seem equally alien to his goodness to allow me to be deceived even occasionally; yet this last assertion cannot be made.

AT VII 21, CSM II 14

Third Meditation: The *Deus deceptor*, God is unconstrained by the PNC.

But what about when I was considering something very simple and straightforward in arithmetic or geometry, for example that two and three added together make five, and so on? Did I not see at least these things clearly enough to affirm their truth? Indeed, the only reason for my later judgment that they were open to doubt was that it occurred that perhaps some God could have given me a nature such that I was deceived even in matters that seemed most evident. And whenever my preconceived opinion about the supreme power of God comes to mind, I cannot but admit that it would be easy for him, if he so desired, to bring it about that I go wrong even in those matters which I think I see most clearly with my mind's eye. Yet when I turn to the things themselves that I think I perceive very clearly, I am so convinced by them that I spontaneously declare: let whoever can do so deceive me, he will never bring it about that I am nothing so long as I continue to think I am something; or make it true at some future time that I have never existed, since it is now true that I exist; or bring it about that two and three added together are more or less than five, or anything of this kind in which I see a manifest contradiction. And since I have no cause to think that there is a deceiving God, and I do not yet even know for sure whether there is a God at all, any reason for doubt that depends simply on this supposition is a very slight and, so to speak, metaphysical one. But in order to remove even this slight reason for doubt, as soon as the opportunity arises I must

examine whether there is a God, and, if there is, whether he can be a deceiver. For if I do not know this, it seems that I can never be quite certain about anything else.

AT VII 36; CSM II 25

Sixth Meditation: God is constrained by the PNC.

. . . I have never judged that something could not be made by [God] except on the grounds that there would be a contradiction in my perceiving it distinctly.

AT VII 71; CSM II 50

Sixth Meditation: Things that can be distinctly understood can be separated by God.

First, I know that all the things that I clearly and distinctly understand can be made by God such as I understand them. For this reason, my ability clearly and distinctly to understand one thing without another suffices to make me certain that the one thing is different from the other, since they can be separated from each other, at least by God. The question as to the sort of power that might effect such a separation is not relevant to their being thought to be different.

AT VII 78; CSM II 54

Objections to the *Meditations* and Descartes's *Replies* (Latin 1641)

From the Second Set of Replies: On the divine attributes and their traces in us.

The fact that I dealt only with the human mind in the Second Meditation is no drawback here. For I readily and freely confess that the idea which we have of the divine intellect, for example, does not differ from that which we have of our own intellect, except in so far as the idea of an infinite number differs from the idea of a number raised to the second or fourth power. And the same applies to the individual attributes of God of which we recognize some trace in ourselves.

But in addition to this, our understanding tells us that there is in God an absolute immensity, simplicity and unity which embraces all other attributes and has no copy in us, but is, as I have said before, 'like the mark of the craftsman stamped on his work' [*Med. 3*, AT VII 51]. In virtue of this we recognize that, of all the individual attributes which, by a defect of our intellect, we assign to God in piecemeal fashion, corresponding to the way in which we perceive them in ourselves, none belong to God and to ourselves in the same sense.

AT VII 137; CSM II 98

From the Fifth Set of Objections (by Gassendi): On what is immutable and eternal.

[commenting on Descartes's account of the immutable and eternal nature of a triangle in *Med. 5*:] . . . it seems very hard to propose that there is any 'immutable and eternal nature' apart from almighty God.

AT VII 319; CSM II 221

From the Fifth Set of Replies: On God's willing the eternal truths.

You say that you think it is 'very hard' to propose that there is anything immutable and eternal apart from God. You would be right to think this if I were talking about existing things, or if I were proposing something as immutable in the sense that its immutability was independent of God. But just as the poets suppose that the Fates were originally established by Jupiter, but that after they were established he bound himself to abide by them, so I do not think that the essences of things, and the mathematical truths which we can know concerning them, are independent of God. Nevertheless I do think that they are immutable and eternal, since the will and decree of God willed and decreed that they should be so. Whether you think this is hard or easy to accept, it is enough for me that it is true. AT VII 380; CSM II 261

From the Fifth Set of Objections: On the separability of two properties of a triangle.

I should like to ask only about the property of the triangle—that its longest side subtends its greatest angle: do you understand this property of the triangle separately from its other property of having its three angles equal to two right angles? And do you therefore admit that God could separate the former property from the latter and isolate it, enabling the triangle to have one property and not the other, or enabling the property to exist apart from the triangle? [Descartes does not reply to this point.] AT VII 334-35; CSM II 232

From the Sixth Set of Objections (compiled by Mersenne): On God and the eternal truths.

The eighth difficulty arises out of your reply to the Fifth set of Objections. How can the truths of geometry or metaphysics, such as those you refer to, be immutable and eternal and yet not be independent of God? What sort of causal dependence on God do they have? Could he have brought it about that there has never been any such thing as the nature of a triangle? And how, may we ask, could he have made it untrue from eternity that twice four makes eight, or that a triangle has three angles? Either these truths depend solely on the intellect that is thinking them, or on existing things, or else they are independent, since it seems that God could not have brought it about that any of these essences or truths were not as they were from all eternity. AT VII 417-18; CSM II 281

From the Sixth Set of Replies: On God's creation of the eternal truths.

5. The assertion that it is self-contradictory that men should be deceived by God [*Med.* 1; AT VII 21] is clearly demonstrated from the fact that the form of deception is non-being, towards which the supreme being cannot tend. On this point all the theologians are agreed, and the entire certainty of the Christian faith depends on it. For why should

we believe what God has revealed to us if we thought that we were from time to time deceived by him? AT VII 428; CSM II 289

6. As for the freedom of the will, the way in which it exists in God is quite different from the way in which it exists in us. It is self-contradictory to suppose that the will of God was not indifferent from eternity with respect to everything which has happened or will ever happen; for it is impossible to imagine that anything is thought of in the divine intellect as good or true, or worthy of belief or action or omission, prior to the decision of the divine will to make it so. I am not speaking here of temporal priority: I mean that there is not even any priority of order, or nature, or of 'rationally determined reason' as they call it, such that God's idea of the good impelled him to choose one thing rather than another. For example, God did not will the creation of the world in time because he saw that it would be better this way than if he had created it from eternity; nor did he will that the three angles of a triangle should be equal to two right angles because he recognized that it could not be otherwise, and so on. On the contrary, it is because he willed to create the world in time that it is better this way than if he had created it from eternity; and it is because he willed that the three angles of a triangle should necessarily equal two right angles that this is true and cannot be otherwise; and so on in other cases.

AT VII 431-32; CSM II 291

Note: Compare the above with St. Augustine, *De diversis questionibus*, Question 46, on the Ideas in the divine mind: "who would dare to say that God has created all things without a rational plan (*irrationabiliter*)?"

8. If anyone attends to the immeasurable greatness of God he will find it manifestly clear that there can be nothing whatsoever which does not depend on him. This applies not just to everything that subsists, but to all order, every law, and every reason for anything's being true or good. If this were not so, then, as noted a little earlier, God would not have been completely indifferent with respect to the creation that he did in fact create. If some reason for something's being good had existed prior to his preordination, this would have determined God to prefer those things which it was best to do. But on the contrary, just because he resolved to prefer those things which are now to be done, for this very reason, in the words of Genesis, 'they are very good'; in other words, the reason for their goodness depends on the fact that he exercised his will to make them so. . . .

[Note: compare this with Augustine, *De civ. dei*, XI.21: "What else is to be understood by that saying during the act of creation: 'God saw that it was good', but the approval of the work accomplished according to the plan or art which is the wisdom of God."] Again, there is no need to ask how God could have brought it about from eternity that it was not true that twice four make eight, and so on; for I admit this is unintelligible to us. Yet on the other hand I do understand, quite correctly, that there cannot be any class of entity that does not depend on God; I also understand that it would have been easy for God to order certain things such that we men cannot understand the possibility of their being otherwise than they are. And therefore it would be irrational for us to doubt what we do understand correctly just because there is something which we do not understand and which, so far as we can see, there is no reason why we should understand. Hence we should not suppose that eternal truths 'depend on the human intellect or on other existing things'; they depend on God alone, who, as the supreme legislator, has ordained them from eternity.

Principles of Philosophy (Latin original 1644, French by Abbé Picot 1647)

Brackets < > indicate changes added in the French edition.

Principles I.22: On the attributes of God.

There is a great advantage in proving the existence of God in this way, that is, by the idea of him. For this enable us at the same time to learn what he is, to the extent permitted by the weakness of our nature. For when we reflect on the idea of God which is innate in us (which we were born with), we see that he is eternal, omniscient, omnipotent, the source of all goodness and truth, the creator of all things, and, finally, that he possesses within him all those things in which we can clearly recognize some perfection that is infinite or unlimited by any imperfection. AT VIIIA 13; CSM I 200

Principles I.23: On the identity of will and intellect in God.

. . . nullo modo Deum sentire putandum est, sed tantummodo intelligere et velle : neque hoc ipsum ut nos, per operationes quodammodo distinctas, sed ita ut, per unicam, semperque eandam et simplicissimam actionem, omnia simul intelligat, velit et operetur. Omnia, inquam, hoc est, res omnes : neque enim vult malitiam peccati, quia non est res.

AT VIIIA 14

. . . nous concluons aussi que Dieu n'en a point; mais qu'il entend et veut, non pas encore comme nous par des operations aucunement differentes, mais que tous-jours, par une mesme et tres-simple action, il entend, veut et fait tout, c'est à dire toutes les choses qui sont en effet; car il ne neut point la malice du peché, pource qu'elle n'est rien.

AT IXB 35

Hence it cannot in any way be supposed that God perceives by means of the senses, but only that he understands and wills. And even his understanding and willing does not happen, as in our case, by means of operations that are in a certain sense distinct from one another; we must rather suppose that there is always a single identical and perfectly simple act by means of which he simultaneously understands, wills and accomplishes everything. When I say 'everything' I mean all *things*: for God does not will the evil of sin [the fault of error; MM 12], which is not a thing. CSM I 201

Note: *Principles* I.23 is relevant to Descartes's rejection of final causality. *Principles* I.28: We cannot know "the purposes which God or nature may have had in view when creating" natural things (CSM I 202). *Principles* III.2: We should not "suppose that the power of our minds can grasp the ends which [God] set before himself in creating the universe" (CSM I 248).

Principles I.24: In deducing effects from God, remember he is infinite, we are finite.

Now since God alone is the true cause of everything which is or can be, it is very clear that the best path to philosophize will be to start from the knowledge of God himself and try to deduce an explanation of the things created by him. This is the way to acquire the most perfect scientific knowledge, that is, knowledge of effects through their causes. In order to undertake this with sufficient caution and without risk of going wrong we must take the precaution of always bearing in mind as carefully as possible both that God, the creator of all things, is infinite, and that we are altogether finite. CSM I 201

Principles II.33: Motion in the plenum is circular.

. . . loca omnia corporibus plena esse, semperque easdem materiae partes aequalibus locis coaequari, sequitur nullum corpus moveri posse nisi per circulum, ita scilicet ut aliud aliquod corpus ex loco quem ingreditur expellat, hocque rursus aliud, et aliud, usque ad ultimum, quod in locum à primo derelictum, eodem temporis momento quo derelictus est, ingrediatur. AT VIIIA 58

. . . que tous le lieux sont pleins de corps, et que chaque partie de la matiere est *tellement* proportionnee a la grandeur du lieu qu'elle occupe, *qu'il n'est pas possible qu'elle en remplisse un plus grand, ni qu'elle se referre en un moindre, ni qu'aucun autre corps y trouve place pendant qu'elle y est*, nous devons conclure qu'il faut necessairement qu'il y ait tous-jours *tout un cercle de matiere ou anneau de corps qui se meuvent ensemble en mesme temps*. . . . AT IXB 81

. . . that every place is full of bodies, and that the same part of matter always takes up the same amount of space, <so that it is impossible for it to fill a greater or lesser space, or for any other body to occupy its place while it remains there>. It follows from this that each body can move only in a <complete> circle <of matter, or ring of bodies which all move together at the same time>: a body entering a given place expels another, and the expelled body moves on and expels another, and so on, until the body at the end of the sequence enters the place left by the first body at the precise moment when the first body is leaving it. CSM I 237-238

Principles II.36: The immutability of God and his conserving operation.

. . . quàm Deum ipsum, qui materiam simul cum motu et quiete in principio creavit, jamque, per solum suum concursum ordinarium, tantundem motûs et quietis in eâ totâ quantum tunc posuit conservat. Nam quamvis ille motus nihil aliud sit in materiâ motâ quàm ejus modus; certam tamen et determinatam habet quantitatem, quam facilè intelligimus eandem semper in totâ rerum universitate esse posse, quamvis in singulis ejus partibus mutetur. Ita scilicet ut putemus, cùm una pars materiae duplò celerius movetur quàm altera, et haec altera duplò major est quàm prior, tantundem motûs esse in minore quàm in majore; ac quantò motus unius partis lentior fit, tantò motum alicujus alterius ipsi aequalis fieri celeriore. Intelligimus etiam perfectionem esse in Deo, non solùm quòd in se ipso sit immutabilis, sed etiam quòd modo quàm maximè constanti et

immutabili operetur: adeò ut, iis mutationibus exceptis, quas evidens experientia vel divina revelatio certas reddit, quasque sine ullâ in creatore mutatione fieri percipimus aut credimus, nullas alias in ejus operibus supponere debeamus, ne qua inde inconstantia in ipso arguatur. Unde sequitur quàm maximè rationi esse consentaneum, ut putemus ex hoc solo, quod Deus diversimodè moverit partes materiae, cùm primùm illas creavit, jamque totam istam materiam conservet eodem planè modo eâdemque ratione quâ priùs creavit, eum etiam tantundem motûs in ipsâ semper conservare. AT VIII A 61-62

. . . Nous connoissons aussi que c'est une perfection en Dieu, non seulement de ce qu'il est immuable en sa nature, mais encore de ce qu'il agit d'une façon qu'il ne change jamais : tellement qu'outre les changemens que nous voyons...*dans le monde*, et ceux que nous croyons, parce que Dieu les a revelez, et que nous sçavons...*arriver ou estre arrivez en la nature*, sans aucun changement de la part du Createur, ne devons point en supposer d'autres en ses ouvrages, de peur de luy attribuer de l'inconstance. D'ou il suit que..., puis qu'il a meu en plusieurs façons differentes les parties de la matiere, lors qu'il les créées, et qu'il les maintient toutes en la mesme façon et avec *les mesme loix* qu'il leur a fait observer en leur creation, il conserve incessamment en cette matiere une égale quantité de mouvement. AT IX B 83-84

. . . In the beginning <in his omnipotence> [God] created matter, along with its motion and rest; and now, merely by his regular concurrence he preserves the same amount of motion and rest in the material universe as he put there in the beginning. Admittedly motion is simply a mode of the matter that is moved. But nevertheless it has a certain determinate quantity; and this we easily understand, may be constant in the universe as a whole while varying in any given part. Thus if one part of matter moves twice as fast as another that is twice as large, we must consider that there is the same quantity of motion in each part; and if one part slows down, we must suppose that some other part of equal size speeds up by the same amount. [For we understand that it is a perfection in God not only that he is immutable in himself, but also that he acts in a manner that is most constant and immutable. Therefore, except for those changes, which evident experience or divine revelation render certain, and which we perceive or believe to happen without any change in the creator; we ought to suppose no others in his works, lest in this way an inconstancy be declared in him.] Thus, God imparted various motions to the parts of matter when he first created them, and he now preserves all this matter in the same way, and by the same process by which he originally created it; and it follows from what we have said that this fact alone makes it most reasonable to think that God likewise always preserves the same quantity of motion in matter.

CSM I 240, modified, based on the Latin

For we understand that it is a perfection in God not only that he is immutable in his nature, but also that he acts in a manner that he never changes; such that, except for the changes that we see . . . *in the world* and those that we believe because God has revealed them, and that we know . . . occur *or have happened in nature* without any change on the part of the creator, we ought not to suppose any others in his works, lest we attribute to him some inconstancy. From the French

Principles II.37: The law of persistence of states.

Atque ex hac eâdem immutabilitate Dei, regulae quaedam sive leges naturae cognosci possunt, quae sunt causae secundariae ac particulares diversorum motuum, quos in singulis corporibus advertimus. Harum primum est, unamquamque rem, quatenus est simplex et indivisa, manere, quantum in se est, in eodem semper statu, nec unquam mutari nisi à causis externis. AT VIII A 62

De cela aussi que Dieu n'est point sujet à changer, *et qu'il agit tous-jours de mesme sorte*, nous pouvons parvenir à la connoissance de certaines regles, *que je nomme* les loix de la nature, et qui sont les causes secondes...des divers mouvemens que nous remarquons en tous les corps; *ce qui les rend icy fort considerables*. La premier est que chaque chose en particulier...continuë d'estre en mesme estat autant qu'il se peut, et que jamais elle ne le change que par *la recontre des autres*. AT IX B 84

From God's immutability we can also know certain rules or laws of nature, which are the secondary and particular causes of the various motions we see in particular bodies. The first of these laws is that each thing, in so far as it is simple and undivided, always remains in the same state, as far as it can, and never changes except by external causes. <except by collision with others.> CSM I 241

Principles II.39: The law of rectilinear tendency.

Altera lex naturae est: unamquamque partem materiae, seorsim spectatam, non tendere unquam ut secunduùm ullas lineas obliquas pergat moveri, sed tantummodo secunduùm rectas; esti multae saepe cogantur deflectere propter occursum aliarum, atque, ut paulo ante dictum est, in quolibet motu fiat quodammodo circulus, ex omni materiâ simul motâ. Causa hujus regulae eadem est quae praecedentis, nempe immutabilitas et simplicitas operationis, per quam Deus motum in materiâ conservat. Neque enim illum conservat, nisi praecisè qualis est eo ipso temporis momento quo conservat, nullâ habitâ ratione ejus qui fortè fuit paulò antè. AT VIII A 63-64

La seconde loy que je remarque en la nature, est que chaque partie de la matiere, en son particulier, ne tend jamais à continuer de se mouvoir suivant des lignes courbes, mais suivant des lignes droites, bien que plusieurs de ces parties soient souvent contraintes de se détourner, pource qu'elles en rencontrent d'autres en leur chemin, et que..., lors qu'un corps se meut, il se fait tous-jours un cercle *ou anneau* de toute la matiere qui est meüë ensemble. Cette regle, comme la precedente, depend de ce que Dieu est immuable, et qu'il conserve le mouvement en la matiere par une operation tres-simple; car il ne le conserve pas comme il a pû estre quelque temps auparavant, mais comme il est precisement au mesme instant qu'il le conserve. AT IX B 85-86

The second law of nature is that every part of matter, considered only in itself, always tends to continue moving, not in any oblique line but only in a straight line. This is true despite the fact that many [parts of matter] are often forcibly deflected by the impact of

other bodies; and, as I have said above, in any motion the result of all the matter moving simultaneously is a kind of circle. The reason for this rule is the same as that for the preceding, namely, the immutability and simplicity of the operation by which God conserves motion in matter. For he always conserves the motion precisely as it is occurring at the very moment when he |conserves it, without taking any account of the motion which was occurring a little while earlier.| CSM I 241-42, based on the Latin conserves it, and not as it may perhaps have been at some earlier time. MM 60, based on the French

Principles II.40: A collision law consistent with conservation of motion.

Tertia lex naturae haec est : ubi corpus quod movetur alteri occurrit, si minoret habeat vim ad pergendum secundum lineam rectam, quam hoc alterum ad ei resistendum, tunc deflectitur in aliam partem, et motum suum retinendo solam motûs determinationem amittit; si verò habeat majorem, tunc alterum corpus secum movet, ac quantum ei dat de suo motu, tantundem perdit. AT VIIIA 65

La troisième loy que je remarque en la nature, est que, si un corps qui se meut et qui en reconte un autre, a moins de force, pour continuer de se mouvoir en ligne droite, que cét autre pour luy resister, il perd sa determination...sans rien perdre de son mouvement; et que, s'il a plus de force, il meut avec soy cét autre corps, et perd autant de son mouvement qu'il luy en donne. AT IXB 86-87

The third law of nature is this: when a moving body collides with another, if its power of continuing in a straight line is less than the resistance of the other body, it is deflected so that, while the quantity of motion is retained, the direction is altered; but if its power of continuing is greater than the resistance of the other body, it carries that body along with it, and loses a quantity of motion equal to that which it imparts to the other body. CSM I 242

Principles II.42: Creation as conservation (as in Disc. 5).

Demonstratur etiam pars altera ex immutabilitate operationis Dei, mundum eâdem actione, quâ olim creavit, continuò iam conservantis. . . . ipsum conservando eâdem actione, ac cum iisdem legibus cum quibus creavit. . . . AT VIIIA 66

On connoistra *mieux* aussi la verité de l'autre partie de cette regle, si on prend garde que Dieu ne change jamais sa façon d'agir, & qu'il conserve le monde avec la mesme action qu'il l'a créé. . . . les maintient encore avec la mesme action & les mesmes loix qu'il leur a fait observer en leur creation. . . . AT IXB 87-88

The second part of the [collision] law [of *Prin. II.40*] is proved from the immutability of the operation of God, by means of which the world is continually preserved through an action identical with its original act of creation. . . . God preserves the world by the selfsame action and in accordance with the selfsame laws as when he created it. . . .

Conversation with Burman (16 April 1648)

‘I will suppose therefore that . . . some malicious demon of the utmost power has employed all his energies in order to deceive me.’ (From *Meditation 1*; AT VII 22, CSM II 15). . . .

What the author [Descartes] says here [‘of the utmost power’] is contradictory, since malice is incompatible with supreme power. AT V 147; CSMK 333

‘[F]or it is impossible to imagine that anything is thought of in the divine intellect as good or true, or worthy of belief or action or omission, prior to the decision of the divine will to make it so.’ (From *Sixth Replies*; AT VII 432, CSM II 291)

BURMAN: But what then of God’s ideas of possible things? Surely these are prior to his will.

DESCARTES: These too depend on God, like everything else. His will is the cause not only of what is actual and to come, but also of what is possible and of the simple natures. There is nothing we can think of or ought to think of that should not be said to depend on God.

BURMAN: But does it follow from this that God could have commanded a creature to hate him, and thereby made this a good thing to do?

DESCARTES: God could not now do this: but we simply do not know what he could have done. In any case, why should he not have been able to give this command to one of his creatures? AT V 159-160; CSMK 343

‘[T]here is always a single identical and perfectly simple act by means of which he [God] simultaneously understands, wills and accomplishes everything.’ (From *Prin.* I.23; AT VIIIA 14, IXB 35; CSM I 201)

DESCARTES: We cannot conceive of how this happens, only understand it. Any different conception we may have arises from the fact that we think of God as a man who accomplishes all things as we would—by means of many different acts. If, however, we pay careful attention to the nature of God, we shall see that we can only understand him as accomplishing all things by means of a single act.

BURMAN: It seems that this cannot be, since there are some of God’s decrees which we can conceive of as not having been enacted and as alterable. These decrees, then, do not come about by means of the single act which is identical with God, since they can be separated from him, or at least could have been. One example of this, among others, is the decree concerning the creation of the world, with respect to which God was quite indifferent.

DESCARTES: Whatever is in God is not in reality separate from God himself; rather it is identical with God himself. Concerning the decrees of God which have already been enacted, it is clear that God is unalterable with regard to these, and, from the metaphysical point of view, it is impossible to conceive of the matter otherwise. [There follows a paragraph on the difficulty of reconciling the immutability of God with the prayers of

men; Descartes favors the Gomarian doctrine of predestination over the Arminian and Jesuit doctrines.]

From the metaphysical point of view, however, it is quite unintelligible that God should be anything but completely unalterable. It is irrelevant that the decrees could have been separated from God; indeed, this should not really be asserted. For although God is completely indifferent with respect to all things, he necessarily made the decrees he did, since he necessarily willed what was best, even though it was of his own will that he did what was best. We should not make a separation here between the necessity and the indifference that apply to God's decrees; although his actions were completely indifferent, they were also completely necessary. Then again, although we may conceive that the decrees could have been separated from God, this is merely a token procedure of our own reasoning: the distinction thus introduced between God himself and his decrees is a mental not a real one. In reality the decrees could not have been separated from God: he is not prior to them or distinct from them, nor could he have existed without them. So it is clear enough how God accomplishes all things in a single act. But these matters are not to be grasped by our powers of reasoning, and we must never allow ourselves the indulgence of trying to subject the nature and operations of God to our reasoning . . .

AT V 165-166; CSMK 347-348

The Passions of the Soul (1649)

Art. 146: About those [Desires whose outcomes] depend both on us and on others.

It is therefore necessary to reject completely the common (*vulgaire*) opinion that there is a Fortune outside of us which makes things happen or fail to happen at its pleasure, and to understand that everything is directed by divine Providence, whose eternal decree is infallible and immutable [Art. 145] in such a way that, except for the things which this same decree has willed to depend on our free will (*libre arbitre*), we ought to think that from our point of view nothing happens which is not necessary and as it were fated, so that we cannot without error desire it to happen otherwise. . . .

AT XI 439; Voss, 99

Augustine:

. . . for in fact the ideas are certain [original and] principal forms of things, i.e., reasons, fixed and unchangeable, which are not themselves formed and, being thus eternal and existing always in the same state, are contained in the Divine Intelligence. . . .

This having been established and conceded, who would dare to say that God has created all things without a rational plan (*irrationabiliter*)? But if one cannot rightly say or believe this, it remains that all things are created on a rational plan (*ratione*), and man not by the same rational plan (*ratione*) as horse, for it is absurd to think this. Therefore individual things are created with reasons unique (*propriis*) to them.

As for these reasons, they must be thought to exist nowhere but in the very mind of the creator. For it would be sacrilegious to suppose that he was looking at something placed outside himself when he created in accord with it what he did create. But if these reasons

of all things to be created or [already] created are contained in the Divine Mind, and if there can be in the Divine Mind nothing except what is eternal and unchangeable, and if these original and principal reasons are what Plato terms ideas, then not only are they ideas, but they are themselves true because they are eternal and because they remain ever the same and unchangeable. It is by participation in these that whatever exists in whatever manner it does exist.

Question 46: On the Ideas

The Supreme Good, than which there is none higher, is God; for this reason He is immutable, good, and therefore truly eternal and truly immortal. All other goods are from Him (*ab illo*), but not of His substance. For that which is of His substance is identical with Himself, but the things He has made are not what He Himself is. It follows That if He alone is immutable, all the things He has made, inasmuch as He has made them out of nothing, are mutable.

De natura boni, 1

What else is to be understood by that saying during the act of creation: ‘God saw that it was good’, but the approval of the work accomplished according to the plan or art which is the wisdom of God? For certainly God did not in the actual achievement of the work first learn that it was good, but, on the contrary, nothing would have been made had it not been first known by Him.

The City of God, XI.21

Nothing could be created . . . unless its reason (if it is correct to call this the *ratio*) lives a life coeternal with the Divine Word, who is coeternal with the Father. . . . For God does not find any cause for the creation of a thing unless in the Word of God He finds that it should be created. . . . When, therefore, we hear, *And God said, ‘Let there be . . .’* we are given to understand that the reason of a thing created was in God. But on hearing the words, *And so it was done*, we see that the creature produced has not overstepped the limits set for its kind in the Divine Word. Finally, when we hear, *And God saw that it was good*, we recognize that creation was approved by the benevolence of the Spirit of God; not that the work pleased the Holy Spirit as something known after it was made, but rather that it pleased Him that it should remain in existence by that same Divine Goodness that previously was pleased that it should be created.

The Literal Meaning of Genesis, II.vi.12 and 14

No one is so foolish as to presume to say that God could not have made everything on one day if He had wished. . . . Who would say that anything could have resisted His will?

The Literal Meaning of Genesis, IV.ii.6

But, of course, the ordering of material things in colors by God the Creator . . . would be unintelligible unless we understood that there existed in the Wisdom of the Creator some Form of the colors to be placed in the various kinds of material things, even though that Form in the Creator is not called a color.

The Literal Meaning of Genesis, IV.v.11

We cannot therefore say that the number six is perfect precisely because God perfected all His works in six days, but rather we must say that God perfected His works in six days because six is a perfect number. Hence, even if these works did not exist, this number

would be perfect; and if it had not been perfect, these works would not have been perfected according to it. *The Literal Meaning of Genesis*, IV.vii.14

[T]he Wisdom of God, through which all things were made, knew them before they were made [through the] divine, immutable, and eternal *rationes*. . . . [I]f he knew them, where if not in himself, since with him was the Word through which all things were made? *The Literal Meaning of Genesis*, V.xiii.29

Peter Lombard

The essence of God alone is also said to be unchangeable. . . . This is why Augustine says in *De Trinit.* V.2, ‘. . . only the substance or essence that God is is unchangeable’ ‘Hence’, as Augustine says in *De Trinit.* I.1, ‘even though difficult, it must be the case that the divine substance sees and knows (*intueri et nosse*) the changeable things it makes without any associated change of its own’. . . . Hence only the essence of divinity, that founded all natures without any change of its own, is truly and properly unchangeable. *Sentences*, Book I, Distinction 8, Chap. 22

Thomas Aquinas

To say that justice depends upon the pure and simple will of God is to say that the will of God does not proceed according to the order of His wisdom, which is blasphemy. (Dicere autem quod ex simplici voluntate dependeat justitia, est dicere quod divina voluntas non procedat secundum ordinem sapientiae, quod est blasphemum.) *De Veritate*, q 23, a 6

. . . Augustine says [Question 46] that God made man and a horse by distinct exemplars. He also says that the exemplars of things are a plurality in the divine mind. *SCG I 54*

[I]t appears that the will of God cannot be of the things that are impossible in themselves.

For these have a contradiction in themselves. . . . For what is incompatible with something excludes some of the things that are necessary to it. If, then, God necessarily wills the things that are required for what He wills . . . it is impossible for Him to will what is incompatible with these things. Thus, it is impossible for God to will the absolutely impossible. *SCG I 84*

Now, although a certain reason of the divine will can be assigned, it does not follow that anything is the cause of the divine will. . . . [N]o discursiveness is to be posited in the divine will. For where there is one act, discursiveness [sequence] is not considered, as was shown above in connection with the intellect [*SCG I.57*]. But by means of one act God wills His goodness and all other things, since His action is His essence.

Through the foregoing is set aside the error of certain persons [the exponents of the Law of the Moors, as Rabbi Moses says; *SCG III 97*], who said that all things proceed

from God according to His simple will, which means that we are not to give an explanation of anything except that God wills it. SCG I 87

. . . it is the archer that directs the flight of the arrow to a definite mark. . . . [God] acts, not by a necessity of His nature, but by his intellect and will. SCG II 23

. . . it evidently follows from the foregoing [SCG II 23] that God produces His effects according to His wisdom. For the will is moved to act as the result of some sort of apprehension; the apprehended good is indeed the object of will. . . . in God there exists intellectual apprehension. . . . Excluded hereby is the error of those [see above, SCG I 87] who said that all things depend on the simple will of God, without any reason.

SCG II 24

. . . [God] cannot make one and the same thing to be and not to be; He cannot make contradictories to exist simultaneously. . . . Again, since the principles of certain sciences—of logic, geometry, and arithmetic, for instance—are derived exclusively from the formal principles of things, upon which their essence depends, it follows that God cannot make the contraries of those principles; He cannot make the genus not be predicable of the species, nor lines drawn from a circle's center to its circumference not to be equal, nor the three angles of a rectilinear triangle not to be equal to two right angles. SCG II 25

Nor, if the action of the first agent is eternal, does it follow that His effect is eternal. . . . For we have already shown in this Book [SCG II.23] that God acts voluntarily in the production of things, but not in such fashion that there be some intermediate action of His, as in us the action of the motive power intervenes between the act of the will and the effect, as we have also previously shown [SCG II.9]. On the contrary, God's act of understanding and willing is, necessarily, His act of making. Now, an effect follows from the intellect and the will according to the determination of the intellect and the command of the will. Moreover, just as the intellect determines every other condition of the thing made, so does it prescribe the time of its making. . . . Nothing, therefore, prevents our saying that God's action existed from all eternity, whereas its effect was not present from eternity, but existed at that time when, from all eternity, He ordained it.

SCG II.35

. . . our position is that God is the cause of the world, not by any necessity of His nature, but by His will, as was explained above [q. 3, a. 15]. Hence the effect caused by God must necessarily follow, not so as to be co-extensive in duration with the divine nature, but at the same time disposed for its existence by the divine will, and precisely such as God willed it to be. *De Potentia Dei*, q. 3, a. 17, ad 4

[A]s the production of a thing into existence depends on the will of God, so likewise it depends on his will that things should be preserved; for He does not preserve them otherwise than by ever giving them existence; hence if He took away His action from them, all things would be reduced to nothing, as appears from Augustine (*Gen. ad lit.* iv.12). . . . In this way, therefore, by the power of another—namely, of God—they are mutable, inasmuch as they are producible from nothing by Him, and are by Him

reducible from existence to non-existence. . . . Hence since God is in none of these ways [of creatures] mutable, it belongs to Him alone to be altogether immutable.

ST I, q. 9, a. 2, resp

The nature of a circle, and the fact that two and three make five, have eternity in the mind of God. *ST I*, q. 16, a. 7, ad 1; see also Augustine, *De Libero Arbitrio* II.8

Ockham on the distinction between the absolute and ordained power of God

Circa primum dico quod quaedam potest Deus facere de potentia ordinata et aliqua de potentia absoluta. Haec distinctio non est sic intelligenda quod in Deo sint realiter duae potentiae quarum una sit ordinata et alia absoluta, quia unica potentia est in Deo ad extra, quae omni modo est ipse Deus. Nec sic est intelligenda quod aliqua potest Deus ordinate facere, et aliqua potest absolute et non ordinate, quia Deus nihil potest facere inordinate.

Sed est sic intelligenda quod ‘posse aliquid’ quandoque accipitur secundum leges ordinatas et institutas a Deo, et illa dicitur Deus posse facere de potentia ordinata. Aliter accipitur ‘posse’ pro posse facere omne illud quod non includit contradictionem fieri, sive Deus ordinaverit se hoc facturum sive non, quia multa potest Deus facere quae non vult facere, secundum Magistrum Sententiarum, lib. I, d. 43; et illa dicitur Deus posse de potentia absoluta. Sicut Papa aliqua non potest secundum iura statuta ab eo, quae tamen absolute potest.

Quodlibet VI, q. 1, primus articulus

Suarez:

Again, these propositions [pertaining to essential predications] are not true because they are known by God, but rather they are so known because they are true; otherwise no reason could be given why God would necessarily know them to be true. For if their truth came forth from God Himself, that would take place by means of God’s will; hence it would not come forth of necessity, but voluntarily. . . . [P]ropositions of this kind . . . have eternal truth not only as they are in the divine intellect but also in themselves and prescinding from it (habent perpetuam veritatem, non solum ut sunt in divino intellectu, sed etiam secundum se ac praescindendo ab illo).

Disputationes Metaphysicae XXXI.12.40; Wells trans., 200-201

Malebranche:

Since most men do not distinctly know that only Eternal Wisdom enlightens them, and that intelligible ideas that are their mind’s immediate object are not created, they imagine that eternal laws and immutable truths are established as such by a free volition of God; and this is what led Descartes to say that God could have made twice four not equal eight, or the three angles of a triangle not equal two right angles, “because,” he says, “there is no order, no law, no ground [*raison*] of goodness and truth that does not depend on God” (Sixth Replies, art. 6, art. 8). This learned man did not notice that there was an order, a

law, a sovereign reason that God necessarily loves, which is coeternal with Him and according to which He necessarily acts, given that He wills to act. For God is indifferent in what He does external to Himself, but He is not indifferent, although perfectly free, in the way in which He does it; He always acts in the wisest and most perfect way possible. He always follows the immutable and necessary order.

The Search after Truth, Elucidation VIII, Reply to the First Objection;
Lennon and Olscamp (LO), 587

I am certain that the ideas of things are immutable [cites Augustine, *On Free Choice of the Will*, II.VIII: the order and truth of number (*ratio et veritas numeri*)], and that eternal laws and truths are necessary—it is impossible that they should not be as they are. Now I see nothing in me of a necessary or immutable nature—I am able not to be, or not to be such as I am; there might be minds unlike me, yet I am certain that there can be no mind that sees truths and laws different from those I see—for every mind necessarily sees that twice two is four, and that one’s friend is to be valued more than one’s dog. It must be concluded, then, that the reason consulted by all minds is an immutable and necessary Reason. . . . and in one sense, we conceive it as more independent than God Himself. For God can act only according to this reason; He depends on it in a sense—He has to consult and follow it. Now, God consults only Himself and depends on nothing. This reason, therefore, is not different from Himself; it is, therefore, coeternal and consubstantial with Him. We see clearly that God cannot punish innocence, that He cannot subject minds to bodies, the He is constrained to observe order. We see, then, the rule, the order, the reason of God—for what wisdom other than God’s could we see when we dare to say that God is constrained to follow it? . . .

Surely, if eternal laws and truths depended on God, if they had been established by a free volition of the Creator, in short, if the Reason we consult were not necessary and independent, it seems evident to me that there would no longer be any true science and that we might be mistaken in claiming that the arithmetic or geometry of the Chinese is like our own. For in the final analysis, if it were not absolutely necessary that twice four be eight, or that the three angles of a triangle be equal to two right angles, what assurance would we have that these kinds of truths are not like those that are found only in certain universities, or that last only for a certain time? Do we clearly conceive that God cannot stop willing what He has willed with an entirely free and indifferent will? Or rather, do we clearly see that God could not have willed certain things, for a certain time, for a certain place, for certain people, or for certain kinds of beings—given, as some would have it, that He was entirely free and indifferent in His willing? As for me, I can conceive no necessity in indifference, nor can I reconcile two things that are so opposite.

Yet I will suppose that we clearly see that God through an entirely indifferent will has established eternal laws and truths for all times and for all places, and that they are now immutable because of His decree. But where do men see this decree? Has God created some being representative of this decree? Will they say that this decree is a modification of their soul? They clearly see this decree, for they have learned from it that immutability attaches to eternal laws and truths; but where do they see it? Certainly, unless they see it in God, they do not see it; for this decree can be only in God, and it can be seen only where it is. Philosophers can be certain of nothing, then, unless they consult God

and He answers them. Their protests here are in vain—they must either submit or remain silent.

But at bottom, this decree is an unfounded product of the imagination. When we think about order and eternal truths and laws, we do not naturally seek their cause, for they have none. We do not clearly see the necessity of this decree, nor do we immediately think about it—rather, we see with evidence through simple perception that the nature of numbers and of intelligible ideas is immutable, necessary, and independent. We clearly see that it is absolutely necessary that twice four be eight and that the square of the diagonal of a square be double that square. If anyone doubts the absolute necessity of these truths, it is because he looks away from their light, reasons on some false premise, and seeks their nature, immutability, and independence elsewhere than in the truths themselves. Thus, the decree of immutability for these truths is a fiction of the mind, which, supposing that it does not see what it perceives in God's wisdom, and knowing that God is the cause of all things, feels itself constrained to imagine a decree in order to ascribe immutability to certain truths it cannot fail to recognize as immutable. But the supposition is false and must be guarded against. Only in the wisdom of God do we see eternal, immutable, and necessary truths. Nowhere else but in this wisdom do we see the order that God Himself is constrained to follow, as I have just indicated. . . .

Finally, if order and eternal laws were not immutable by the necessity of their nature, the foundation of the clearest and strongest arguments of religion would seemingly be destroyed, as well as freedom and the most certain of the sciences. . . . [I]f this order depends on God's free decree, it will always be necessary to call upon God to learn of His decree; God will always have to be consulted (in spite of the disliking certain learned people have for appealing to Him); we shall have to yield to this truth, that our instruction depends upon God. But this free decree that caused order is, for the reasons I have already given, a fiction of the mind. . . . It has always been true that twice two is four and this cannot become false. This is clear, without it being necessary *that God as sovereign legislator has established these truths*, as Descartes has asserted in his reply to the sixth objections [arts. 6 and 8] against his metaphysical meditations.

The Search after Truth, Elucidation X, LO, 613-618

Leibniz:

It is thus clear that an absolute will which does not depend on the goodness of things is a monstrosity. Leibniz to Wedderkopf, May 1671, A II I 118; Loemker, 147

. . . I fear that we are deceived by fine words, since Descartes's God, or perfect being, is not a God like the one we imagine or hope for, that is, a God just and wise, doing everything possible for the good of creatures. Rather, Descartes's God is something approaching the God of Spinoza, namely, the principle of things and a certain supreme power or primitive nature that puts everything into motion [*action*] and does everything that can be done. Descartes's God has neither *will* nor *understanding*, since according to Descartes he does not have the *good* as object of the will, nor the *true* as object of the understanding. Also, he does not want his God to act in accordance with some end; this is why he eliminates the search for final causes from philosophy, under the clever pretext

that we are not capable of knowing God's ends. . . . I am surprised by the ease with which one can deceive people merely by playing around with pleasing words, though corrupting their meaning.

Leibniz to Molanus(?) (ca. 1679), G IV 299; Ariew and Garber, 242-43

Thus I am far removed from the opinion of those who maintain that there are no rules of goodness and perfection in the nature of things or in the ideas God has of them and who say that the works of God are good solely for the formal reason that God has made them. . . . in saying that things are not good by virtue of any rule of goodness but solely by virtue of the will of God, it seems to me that we unknowingly destroy all of God's love and all his glory. For why praise him for what he has done if he would be equally praiseworthy in doing the exact contrary? . . . Besides, it seems that all acts of will presuppose a reason for willing and that this reason is naturally prior to the act of will. That is why I also find completely strange the expression of some other philosophers who say that the eternal truths of metaphysics and geometry and consequently also the rules of goodness, justice, and perfection are merely the effects of the will of God . . .

Discourse on Metaphysics (1686), 2; G IV 248; Ariew and Garber, 36

[I]f the affirmations of necessary truths were actions of the will of the most perfect mind, these actions would be anything but free, for there is nothing to choose. It seems that M. Descartes . . . was preserving only the name of freedom.

Theodicy (1710), sec. 186; Huggard trans., 245

. . . we should not imagine, as some do, that since the eternal truths depend on God, they are arbitrary and depend on his will, as Descartes appears to have held, and after him Mr. Poiret. This is true only of contingent truths, whose principle is *fitness* [*convenance*] or the choice of the *best*. But necessary truths depend solely on his understanding, and are its internal object (*Theodicy*, sec. 180, 184, 185, 335, 351, 380).

Monadology (1714), 46; G IV 614; Ariew and Garber, 218-19

Gilson

Let us first say that if one means by the term 'source' a complete doctrine, one that Descartes was content to introduce as such into his system, then there is, properly speaking, no source that one can assign for the Cartesian doctrine of the divine freedom. This singular conception of a God absolutely one, creating the eternal truths in an order of causality incomprehensible to our finite minds, must be regarded as the product of the philosopher's personal reflections. On this point, Descartes was not deceived in thinking that he was introducing something new. Of all his metaphysical conceptions it is perhaps the most original, that which contains the least adventitious elements and which is best explained by the internal necessity of the system. This is also perhaps why Descartes is guarded about bringing it forth and seems to dissimulate it; such affirmations were surprising and singular for the theologians whom he addressed.

. . .

He only transforms the traditional conceptions when he finds himself constrained to it, that is to say, when the requirements of his physics are incompatible with the commonly taught theology.

La Liberté chez Descartes et la Théologie (Paris: Alcan, 1913), 157, 441-42