

Correspondence

Baruch Spinoza

Copyright © Jonathan Bennett 2017. All rights reserved

[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis indicates the omission of a brief passage that seems to present more difficulty than it is worth. Longer omissions are reported between brackets in normal-sized type.—Many of the letters have somewhat ornate salutations (e.g. ‘Most excellent Sir, and dearest friend’) and/or signings-off (e.g. ‘Farewell, special friend, and remember me, who am your most devoted. . .’); these are omitted except when there’s a special reason not to.—For a helpful and thoughtful presentation of the letters, see Edwin Curley (ed), *The Collected Works of Spinoza*, vol. 1 for letters 1–28, vol. 2 for letters 29–84. **The editorial notes in the present version derive mostly from those two volumes, the material in vol. 2 having been generously made available by Curley, in advance of its publication, to the preparer of the version.**

First launched: May 2014

Contents

letters 1–16: written in 1661–1663	1
1. from Oldenburg, 26.viii.1661:	1
2. to Oldenburg, ix.1661:	1
3. from Oldenburg, 27.ix.1661:	3
4. to Oldenburg, x.1661:	4
5. from Oldenburg, 21.x.1661:	5
6. to Oldenburg, iv.1662:	5
7. from Oldenburg, vii.1662:	9
8. from de Vries, 24.ii.1663:	9
9. to deVries, iii.1663:	11
10. to deVries, iii(?).1663:	13
11. from Oldenburg, 3.iv.1663:	13
12. to Meyer, 20.iv.1663:	15
12a. to Meyer, 26.vii.1663:	18
13. to Oldenburg, 27.vii.1663:	19
14. from Oldenburg, 10.viii.1663:	20
15. to Meyer, 3.viii.1661:	21
16. from Oldenburg, 4.viii.1663:	22
 letters 17–33: written in 1664–1665	 24
17. to Balling, 20.vii.1664:	24
18. from van Blijenbergh, 12.xii.1664:	25
19. to van Blijenbergh, 1.i.1665:	26
20. from van Blijenbergh, 16.i.1665:	29
21. to van Blijenbergh, 29.i.1665:	35
22. from van Blijenbergh, 19.ii.1665:	39
23. to van Blijenbergh, 13.iii.1665:	41
24. from van Blijenbergh, 27.iii.1665:	43
25. from Oldenburg, 28.iv.1665:	44
26. to Oldenburg, v.1665:	45
27. to van Blijenbergh, 1.vi.1665:	45
28. to Bouwmeester, vi.1665:	46

29. from Oldenburg, 20.ix.1665:	46
30. to Oldenburg, 1.x.1665:	47
31. from Oldenburg, 12.x.1665:	49
32. to Oldenburg, 20.xi.1665:	50
33. from Oldenburg, 8.xii.1665:	52
letters 34–58: written in 1666–1674	54
34. to Hudde, 7.i.1666:	54
35. to Hudde, 10.iv.1666:	55
36. to Hudde, vi.1666:	56
37. to Bouwmeester, 10.vi.1666:	57
38. to van der Meer, 1.x.1666:	58
39. to Jelles, 3.iii.1667:	58
40. to Jelles, 25.iii.1667:	59
41. to Jelles, 5.ix.1669:	61
42. from van Velthuysen to Ostens, 24.1.1671:	61
43. to Ostens, ii.1671:	68
44. to Jelles, 17.ii.1671:	70
45. from Leibniz, 3.x.1671:	71
46. to Leibniz, 9.xi.1671:	71
47. from Fabritius, 16.ii.1673:	72
48. to Fabritius, 30.iii.1673:	73
48a. from Jelles (to Spinoza?), early 1673:	73
48b. reactions to the above, a little later:	74
49. to Graevius, 14.xii.1673:	75
50. to Jelles, 2.vi.1674:	75
51. from Boxel, 14.ix.1674:	75
52. to Boxel, 16–20.ix.1674:	76
53. from Boxel, 21.ix.1674:	76
54. to Boxel, x.1674:	78
55. from Boxel, x/xi.1674:	80
56. to Boxel, x/xi.1674:	82
57. from von Tschirnhaus, 8.x.1674:	84
58. to Schuller, x.1674:	85

letters 59–84: written in 1675–1676	88
59. from von Tschirnhaus, 5.i.1675:	88
60. to von Tschirnhaus, i.1675:	89
61. from Oldenburg, 8.vi.1675:	89
62. from Oldenburg, 22.vii.1675:	90
63. from Schuller, 24.vii.1675:	90
64. to Schuller, 29.vii.1675:	91
65. from von Tschirnhaus, 12.viii.1675:	92
66. to von Tschirnhaus, 18.viii.1675:	92
67. from Burgh, 11.ix.1675:	93
67a. from Steno, 1675:	98
68. to Oldenburg, reply to 62:	101
69. to van Velthuysen, no date:	102
70. from Schuller, no date:	102
71. from Oldenburg, 15.xi.1675:	104
72. to Schuller, 18.xi.1675:	104
73. to Oldenburg, no date:	104
74. from Oldenburg, no date:	105
75. to Oldenburg, no date:	106
76. to Burgh, reply to 67:	108
77. from Oldenburg, 14.i.1676:	110
78. to Oldenburg, 7.ii.1676:	111
79. from Oldenburg, 11.ii.1676:	112
80. from von Tschirnhaus, 2.v.1676:	113
81. to von Tschirnhaus, 5.v.1676:	113
82. from von Tschirnhaus, 23.vi.1676:	113
83. to von Tschirnhaus, 15.vii.1676:	114
84. to a friend, date unknown:	114
Notes on the other correspondents	116

Glossary

affect: A feeling, emotion, attitude, obsession; in Spinoza's usage always a damaging one, but not so on page 66, where the word is used by someone else.

affection: state, quality.

Collegiant: A Dutch sect of Quaker-like dissenters who were persecuted by the dominant Calvinist clergy. Spinoza attended some of their meetings.

deist: Someone who believes there is a God (opposite of 'atheist'), but whose theology is *thin* compared with Christianity—e.g. the deist doesn't think of God as intervening in the world.

eminently: This is a scholastic technical term meaning 'in a higher form'. To say that God has (say) perception 'eminently' is to say that he has perception in some higher form that doesn't involve his straightforwardly, in the ordinary sense, *perceiving* anything. The term is used by Boxel in letter 55, and mocked by Spinoza in 56

fatal: This word is used in connection with the idea of something's being absolutely and utterly bound to happen—the idea of this as somehow laid down in advance.

magistrate: In this work, as in general in early modern times, 'a magistrate' is anyone with an official role in government; and 'the magistrate' is the ruler.

parhelia: Two bright patches flanking the sun, sometimes called 'false suns'.

philosophy: In this correspondence the word usually points more to natural science than to what we would call 'philosophy' these days.

positive: This occurs where the Latin has *positivus*, which in letters 50 and 54 is contrasted with 'negative'. But in fact the main sense of *positivus*—except for one that is irrelevant here—contrasts not with 'negative' but with 'comparative'. The English 'positive' also is a grammatical technical term with that meaning: good-better-best, positive-comparative-superlative. Some of the letters involve Spinoza's view that 'sin is not something positive'; this goes with his saying that what we call 'sin' is really a **privation**. In his and others' usage a privation in x is **(i)** a lack of something that **(ii)** x ought to have or is normal or natural for things like x to have. Now, the statement that a privation is not something 'positive' could mean that

- (i)** a privation is a lack, a case of *not* having something—the concept of privation is *negative*; or that
- (ii)** a privation in x is x's lacking something that it *ought* to have; our notion of what x ought to have comes from our comparing x with other things that we regard as being of the same kind—the concept of privation is *comparative*.

In letters 19–20, 23–24, and 36 sense **(ii)** seems at least as fitting as sense **(i)**, though it could be that both are at work. Those five letters were originally written in Dutch, and *positivus* translates one or other of two different Dutch words; but there's reason to think that in each case the writer was thinking in terms of the standard scholarly language, Latin.

principle: In just two places in the correspondence, 'principle' is used in a sense, once common but now obsolete, in which 'principle' means 'source', 'cause', 'driver', 'energizer', or the like.

salutary: Usually it means ‘conducive to health’, but a secondary meaning, ‘conducive to salvation’, is what’s in play here.

Schools: A standard label for departments of philosophy (including physics) that were pretty entirely under Aristotle’s influence.

vivid and clear: The Latin phrase
clarus et distinctus

is translated here by the phrase
‘vivid and clear’.

The more usual translation for it and (in Descartes’s French works) for the French phrase

clair et distinct

has been ‘clear and distinct’; but this is demonstrably wrong for Descartes’s French and Latin. He only once takes the phrase apart to explain it:

‘I call a perception *claram* when it is present and accessible to the attentive mind—just as we say that we see something *clare* when it is present to the eye’s gaze and stimulates it with a sufficient degree

of strength and accessibility. I call a perception *distinctam* if, as well as being *clara*, it is so sharply separated from all other perceptions that every part of it is *clarum*. . . . A perception can be *clara* without being *distincta* but not vice versa. When someone feels an intense pain, his perception of it is *clarissima*, but it isn’t always *distincta* because people often get this perception muddled with something else. (*Principles of Philosophy* 1:45–6)

Of course he is not saying anything as stupid as that intense pain is always *clear*! His point is that pain is vivid, up-front, not shady or obscure. And for an idea to be *distincta* is for every nook and cranny of it to be vivid; which is not a bad way of saying that it is in our sense ‘clear’.—It’s reasonable to think that this also holds for Spinoza’s use of the phrase. The most common use of *clarus* is as meaning ‘bright’ or ‘vivid’ or the like, as in *clara lux* = ‘broad daylight’, though it can also mean ‘clear’ in our sense. But if Spinoza or anyone else used it in that sense in the phrase *clarus et distinctus*, then what is there left for ‘distinctus’ to mean?

letters 34–58: written in 1666–1674

34. to Hudde, 7.i.1666:

Till now other business has prevented me from sending you what you asked for and I said I would provide, a demonstration that there is only one God from the premise that God's nature involves necessary existence. I start the demonstration with this:

- (1) The true definition of each thing contains nothing except the simple nature of the thing defined.

From this it follows that

- (2) No definition involves or expresses any multiplicity or any definite number of individuals, because a definition involves or expresses nothing but the nature of the thing as it is in itself.

For example, the definition of *triangle* contains nothing but the simple nature of the triangle, not some definite number of triangles; just as the definition of *the mind* as a thinking thing, or the definition of *God* as a perfect being, contains nothing but the nature of the mind or of God; it says nothing about how many minds or gods there are.

- (3) There must necessarily be a positive cause of each existing thing, through which it exists.
 (4) This cause must be affirmed to exist either •in the nature and definition of the thing itself—because existence pertains to its nature, i.e. its nature necessarily contains existence—or •outside the thing.

From these premises it follows that if some definite number of individuals exists in nature, there must be one or more causes bringing it about that there are precisely that number of individuals, neither more nor fewer. Suppose for example that exactly twenty men exist in nature now (and to keep

things simple suppose they are the only men there have ever been): we can't explain why there are twenty of them simply by looking into the cause of human nature in general. That might explain why there is at least one man, but it couldn't explain why there are exactly twenty of them. Now, according to (3) there must be, for each individual man, a reason and cause why *he* exists. But according to (2) and (3) that cause can't be contained in the nature of the man himself, for the true definition of *man* doesn't involve the number twenty. Therefore, according to (4), the cause of the existence of these twenty men—and hence of each of them separately—must exist outside them.

It follows that all the things that are conceived to exist as many in number must result from external causes, and aren't produced by the force of their own nature. But since according to (2) necessary existence pertains to the nature of God, his true definition must contain his necessary existence; so that his necessary existence can be inferred from his true definition. But from his true definition (as I have already demonstrated from (2) and (3)) the necessary existence of many gods cannot be inferred. It follows, therefore, that there is only one God. Q.e.d.

This is the method that seems best to me at this time to demonstrate the proposition. Previously I demonstrated it in a different way, using the distinction between essence and existence. But in the light of what you said to me I was happy to send you this demonstration. I hope you will find it satisfactory, and I shall await your judgment on it.

35. to Hudde, 10.iv.1666:

In your last letter, written on 30.iii, you have cleared up very nicely what was somewhat obscure to me in your earlier letter (10.ii). Now that I know what your own opinion is, I shall state the question as you conceive it, namely:

•Is there only one being that exists by its own sufficiency or power?

Not only do I answer Yes, but I also undertake to demonstrate this from the fact that the being's nature involves necessary existence. (It could easily be demonstrated from •God's intellect—as I showed in my *Descartes's 'Principles'*—or from •God's other attributes.) I start by showing what properties a necessarily existent being must have. It must be . . .

(1) . . . eternal.

For if a limited duration were attributed to it, it would be conceived as not existing after that, i.e. as not involving necessary existence, which would be contrary to its definition.

(2) . . . simple, and not composed of parts.

Component parts must be prior in nature and knowledge to what is composed of them. In a being that is eternal by its nature this cannot be.

(3) . . . not limited; it can only be conceived as infinite.

To think of that being (and its nature) as limited is to think of it as not existing outside its limits; and that is contrary to its definition. [Spinoza is saying in effect that something that exists necessarily must exist **(1)** everywhen and **(3)** everywhere.]

(4) . . . indivisible.

If the being *x* were divisible, it could be divided into parts, and then there are two cases:

(i) The parts are of a different nature from *x* itself; in which case *x* could be destroyed by being pulled to pieces, and so could fail to exist, which is contrary to its definition.

(ii) The parts are of the same nature as *x* itself; in which case each part of *x* would involve necessary existence through itself, which means that it could exist (and be conceived) independently of the other parts, so that its nature could be grasped as finite, which (by **(3)** above) is contrary to the definition.

This shows us that if we try to ascribe any imperfection to a being of this kind, we shall immediately fall into a contradiction. For whether the supposed imperfection consists in •some defect or limitedness, or •some change forced on the being by external causes stronger than it is, it always comes down to this: . . .the being in question does not exist necessarily. For that reason I conclude that

(5) whatever involves necessary existence cannot contain any imperfection, but must express pure perfection.

Next,

(6) If we suppose that a being that *doesn't* express all perfections exists of its own nature, we must also suppose that the being which contains within itself all perfections also exists. For if a being with a lesser power exists by its own sufficiency, then of course a being with a greater power must also exist by its own sufficiency.

[Spinoza explains, not very clearly, that that argument relies on a tie between perfection and power.]

To come to the point at last: I say that there can be only one being whose existence pertains to its nature, namely the being that has all perfections in itself—the one I call 'God'. A being to whose nature existence pertains must express every perfection (by proposition 5) and no imperfection; so its nature must be possessed by God (who by proposition 6, we must also hold exists), because God has all perfections and no imperfections. And nothing other than God can have it, because otherwise one and the same nature involving

necessary existence would exist in two forms, which according to the preceding demonstration is absurd. So God and nothing else involves necessary existence. This is what was to be demonstrated.

36. to Hudde, vi.1666:

I have not been able to respond more quickly to your letter of 9.v. Because I see that for the most part you are suspending judgment on the demonstration I sent you—I think because you find it obscure—I shall try to explain its meaning more clearly here.

First, in (1)–(4) I listed four properties that a being existing by its own power must have. These four, and others like them, I boiled down to *one*—namely *pure perfection*—in (5). Next, to derive everything needed for the demonstration only from the given supposition, I sought in (6) to demonstrate God's existence. And from that, finally, calling on nothing else but the simple meanings of words, I inferred the desired conclusion.

That in short is what I was trying to do. Now I shall explain the meaning of each step separately, beginning with the properties set out first.

You don't find any difficulty in proposition (1); and it is nothing but an axiom, as is (2). All I mean by 'x is simple' is 'x is not composite'—doesn't have parts that differ in nature from x or parts agreeing in nature with x. The demonstration is certainly universal.

You have perceived the meaning of (3) up to this point: that if the being is *thought* then it can't be conceived to be limited in thought, and if it is *extension* it can't be conceived to be limited in extension. But you say that you don't perceive that the conclusion follows. Yet all it needs is this: it is a contradiction to conceive something whose definition

involves existence. . . . under a negation of existence; and since a thing's being limited isn't a positive fact about it, but only a fact about some existence that it doesn't have, it follows that something whose definition involves or affirms existence can't be conceived as limited. . . .

All I wanted to show in (4) was that such a being can't be divided into parts that have the same nature as it has, because that would be inconsistent with its having the three properties I have already proved it to have. And the being can't be divided into parts that have a different nature from the one it has, because that would mean that it could be destroyed, i.e. pulled apart so that nothing expresses the nature of the whole. The latter part of this argument holds good even if the parts are supposed to be necessarily existent.

In (5) I presupposed only that perfection consists in being, and imperfection in the privation [see Glossary] of being. I say *privation* and not mere *lack*. An extended thing, for example, may lack thought but this isn't a privation in it and therefore isn't an imperfection in it. But if it were deprived of extension, that would be a privation and thus would show an imperfection in it; and that would be the situation if it were limited. Similarly if it lacked duration, position, etc.

You concede (6) without reservation, but you say that it doesn't explain to you why this:

there are many beings that exist through themselves and can subsist by their own sufficiency, but differ in nature as thought differs from extension

is impossible. I can only judge from this that you understand it in a sense very different from mine. I'm sure I see what you are making of it, but not to lose time I shall just explain my meaning.

What I take (6) to say, then, is that if we assert that something that is only

•unlimited *in its own kind*, and perfect *in its own kind* exists by its own sufficiency, then we'll have to concede the existence also of a being that is

•*absolutely* unlimited and *absolutely* perfect.

This being I call 'God'. For example, if we maintain that extension or thought (each of which can be perfect in its own kind. . . .) exists by its own sufficiency, we will also have to concede the existence of God, who is absolutely perfect—i.e. of an absolutely unlimited being.

Please notice what I said just now about the term 'imperfection', namely that it—like the term 'privation'—signifies that a thing lacks something that pertains to its nature. For example, an extended thing can be called 'imperfect' in relation to duration (it doesn't last longer) or position (it doesn't stay still) or quantity (it isn't bigger); but it won't be called 'imperfect' because it doesn't think, since its nature, consisting only in *extension*. . . ., requires nothing of that sort. Something extended can be called 'imperfect' or 'perfect' only on the basis of its being limited or unlimited *in extension*. And since the nature of God doesn't consist in a definite kind of being, but in a being that is absolutely unlimited, his nature must have everything that expresses being perfectly, since otherwise his nature would be limited and deficient.

It follows from this that there can only be one being, God, which exists by its own power. If we assert, for example, that extension involves existence, it must be eternal and unlimited, expressing absolutely no imperfection but only perfection. Therefore, extension will. . . .express God's nature in some way. For God is a being that is not just unlimited in a certain respect but absolutely unlimited and omnipotent in its essence. Extension was just an example chosen at random; the same thing will also have to be affirmed of everything that we want to maintain as having such a nature.

I conclude, then, as in my preceding letter, that nothing except God exists by its own sufficiency. I think what I have said here will suffice to explain the meaning of the preceding letter; but you can judge that better than I can.

With that I might finish. But because I intend to have new dishes made for polishing lenses, I'd like to get your advice about this. I don't see what we gain by grinding convex-concave lenses. On the contrary, if I have calculated properly, convex-plane ought to be more useful. [Spinoza defends this in terms of a diagrammed example. And then:] Convex-concave lenses please me less not only because •they require twice the labour and expense but also because •their rays—not being all directed toward the same point—never fall perpendicularly on a concave surface. But no doubt you have already considered these things, made more accurate calculations, and finally settled the matter. So I ask your judgment and advice about this.

37. to Bouwmeester, 10.vi.1666:

I haven't been able until now to reply to your last letter that I received some time ago. Now that I am granted a little relief from various affairs and worries, having fought my way free of them. . . ., I write to thank you warmly for your love and courtesy to me, which you have quite often shown by your actions but have now also by your letter.

I pass now to your question:

Is there, or could there be, a method that would enable us to proceed smoothly and untiringly in thinking about the most excellent things? Or are our thoughts governed more by fortune than by skill, our minds being like our bodies in being vulnerable to chance events?

I answer that there *must* be a method by which we can

direct and link our vivid and clear perceptions, and that the intellect is not vulnerable to accidents as the body is.

This is evident simply from this: . . . All the vivid and clear perceptions we form can arise only from other vivid and clear perceptions that are in us; they can't have any other cause, so they can't be caused from outside us. It follows that the vivid and clear perceptions we form depend only on our nature, and its definite, fixed laws—i.e. on our absolute power—not on fortune (i.e. not on causes which, although they too act according to definite and fixed laws, are unknown to us and foreign to our nature and power). I acknowledge that all our other perceptions depend on fortune in the highest degree.

These considerations make it clearly evident that the true method must chiefly consist in the knowledge of the pure intellect—of its nature, its laws. And the main thing that is needed for this is to distinguish •the intellect from •the imagination, i.e. to distinguish •true ideas from •ideas that are made up, false, doubtful, or dependent only on the memory. The method doesn't require us to know the nature of the mind through its first cause; all that is needed is to put together a little natural history of the mind, or of perceptions, in the way Bacon teaches.

So much for the true method and the way to arrive at it. But I should warn you that these things require uninterrupted meditation, and a constant mind and purpose; and to achieve *that* you have to decide on a definite way and principle of living, and to set yourself a definite goal.

38. to van der Meer, 1.x.1666:

While isolated here in the country, I've been thinking about the problem you raised, and find it to be very simple. The general proof rests on this: that a person is playing fairly if

his expectation of winning or losing is equal to his opponent's. This expectation consists of •the probability and •the money the opponents stake and risk: if the probability is the same on each side, then each player must stake the same amount of money; but if the probabilities are unequal, then the player with the greater probability of winning must stake correspondingly more money. That will give them equal expectations, making the game fair. . . .

Suppose that A, B, and C are playing together with equal probabilities of winning, and that they all wager the same amount of money. Clearly,

- each is risking only 1/3 of the total stake to win 2/3, and
- each has only one chance to win against two chances of losing.

If C pulls out before they have begun to play, he ought to receive only what he staked—i.e. 1/3 of the total—and that's how much B must pay if he wants to buy C's expectation, and take his place. A can't object to this transaction because it makes no difference to him whether he takes on two men with one chance each or one man with two chances.

[The letter continues with a page of further examples, all illustrating the same basic point.]

39. to Jelles, 3.iii.1667:

Various problems have prevented my replying to your letter more quickly. I've examined your point about Descartes's Dioptric. [Note by Curley: Descartes held that hyperbolic and elliptical lenses were preferable to any others we might conceive of.] He explains the different sizes of images formed at the base of the eye solely in terms of one fact about the rays coming from different points on the object, namely

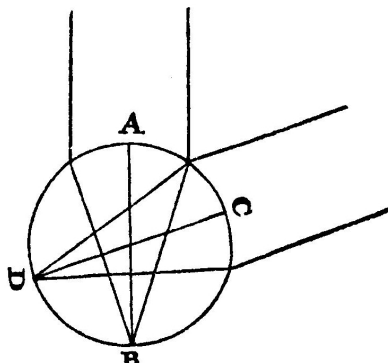
- how far they are from the eye when they begin to cross each other.

He ignores the fact about

- how big an angle they make when they cross each other on the surface of the eye,

although the latter is what matters in telescopes. He passed over it in silence because, apparently, he couldn't determine that angle mathematically; and that was because he didn't know any means of collecting those rays coming in parallel from different points into so many other points.

·Or· perhaps he kept silent so as not to prefer the circle to the other figures he introduced. In fact the circle is in this respect better than any other figures we can discover, because the circle, being the same everywhere, has the same properties everywhere.



For example, if the circle ABCD has this property:

- all the rays parallel to AB and coming from the side of A are refracted at its surface in such a way that they then come together in the point B,

then

- all the rays parallel to CD and coming from the side of C are refracted on its surface in such a way that they all meet in the point D.

This cannot be said of any other figure, although hyperbolas and ellipses have infinite diameters.

So the situation is as you say. If we attended only to the length of the eye or of the telescope, we would be forced to make very long telescopes before we could see things on the moon as distinctly as we do those on earth. But as I said, the chief thing is the size of the angle at which rays from different points cross the surface of the eye. And this angle is also larger or smaller as the foci of the lenses arranged in the telescope differ more or less. If you'd like to see a demonstration of this, I'll be happy to send it to you.

40. to Jelles, 25.iii.1667:

I did receive your letter of 14.iii, but various obstacles have prevented me from answering earlier.

Concerning the matter of Helvetius, I spoke to Vossius about it and. . .he laughed heartily and was surprised that I would ask him about these trifles. However, not thinking this of any importance [i.e. not being swayed by Vossius's scepticism] I went to the silversmith who had tested the gold. He took quite a different view, saying that in the smelting and the separation the gold had increased and become heavier by an amount equal to the weight of the silver he had put into the crucible for separation. So he firmly believed that the gold that transmuted his silver into gold had something special in it. Various other gentlemen present at the time agreed. [Was this credulous of Spinoza? Curley points out that 'Boyle, Huygens, and Newton all took seriously the possibility of transforming baser metals into gold'.]

After this I went to Helvetius himself, who showed me the gold, and the crucible coated with gold on the inside, and told me that he had thrown into the molten lead hardly a fourth of a grain of barley or mustard seed [presumably meaning

'a piece of gold hardly as big as' etc.]. He added that he would soon publish an account of the whole business, and added that someone. . . .had done the same thing in Amsterdam. . . .

The author of the little book you write about—claiming to have demonstrated the falsity of Descartes's arguments for the existence of God in *Meditations* 3 and 5—is fighting with his own shadow and will harm himself more than others. I agree with you that Descartes's axiom is somewhat obscure and confused; he would have spoken more clearly and truly if he had said:

The power of thought to •think about things, i.e. to conceive them, is not greater than Nature's power to •bring them into existence.

This is a clear and true axiom, from which God's existence follows very clearly and validly. The argument of this author's that you recount shows that he doesn't yet understand the matter. . . .

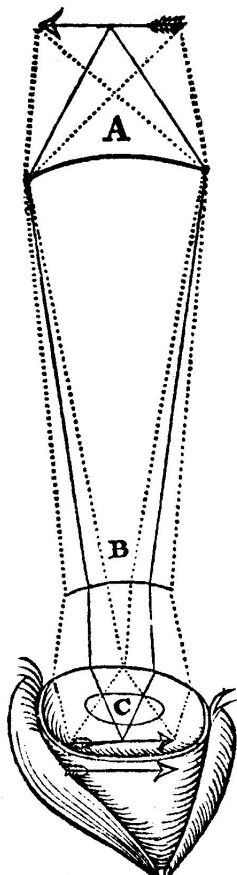
Suppose someone asks, regarding a limited body of this kind, 'What causes it to move?' We can reply that it has been determined to such motion by another body, and this again by another, and so on •backwards• to infinity. We are free to give this reply because the question is only about motion, and by continually supposing another body we give a sufficient and eternal cause of that motion. But if I see in the hands of an uneducated man an elegantly •hand•-written book full of excellent thoughts, and I ask him where he got it, and he replies that he copied it from a book owned by another uneducated man whose •hand•-writing was also elegant, and he proceeds in this way to infinity, he won't satisfy me. For that answer concerns only the shape and order of the letters, whereas I was also asking about their meaning—the thoughts they express—and he doesn't answer *that* question by proceeding in this way to infinity •with a book copied from a book copied from a book•. . . .How this

can be applied to ideas can easily be seen from what I have explained in the ninth axiom of my geometric demonstration of Descartes's *Principles of Philosophy*.

In your letter of 9.iii you ask for a further explanation of what I had written in my earlier letter [letter 39] about a circular shape. All you need is to notice that all the rays that are assumed to be parallel when they strike the first lens of the telescope are not really so because they all come from one point. We treat them as parallel •because they are so close to being so, i.e.• because the object is so far from us that the opening of the Telescope is to be regarded as only like a point in relation to the distance.

To see a whole object we need not only the rays from one single point but also all the other cones of rays proceeding from all the other points; and they must come together in so many other foci when they pass through the lens. The eye isn't so precisely constructed that all the rays coming from the different points of the object meet in exactly as many points in the back of the eye; but shapes that can produce this result are certainly preferable to all others, •and the circle is such a shape•. Any limited segment of a circle can bring together all the rays proceeding from one point into another point on its diameter; so the circle as a whole can have the same effect on all the rays coming from the other points on the object, each point on the object corresponding to one point of focus. . . .

What I say here about a circle can't be said about an ellipse or a hyperbola, much less other more composite shapes, because one can only draw one line that passes through each focus from a single point on the object. This is what I was trying to say in my first letter.



You can see from the above figure the demonstration that the angle made on the surface of the eye by rays coming from different points becomes greater or less as the foci are more or less distant.

41. to Jelles, 5.ix.1669:

[This letter is entirely devoted to describing, with pictures, a lengthy experiment that Spinoza had done—with two helpers, ‘all three of us as busy as we could be’—in the field of hydrodynamics, the physics of the movement of water through tubes of various lengths and widths. There is nothing else about this in the correspondence that we have, and it isn’t of philosophical interest.]

[What is interesting is that this is the only letter of Spinoza’s that we have from a nearly four-year-long stretch starting at iii.1667. In his 1928 edition of the correspondence, Abraham Wolf writes: ‘Reasons for the absence of other letters readily suggest themselves. These were busy years for Spinoza, and a very trying period for him and his friends. Simon de Vries died in 1667. Pieter Balling died in 1669. Oldenburg was imprisoned in the Tower of London in 1667. Koerbagh, a warm friend of Spinoza and a too ardent disciple of Spinozism, was imprisoned in Amsterdam in 1668, and died in prison under gruesome circumstances. All who were suspected of being free-thinkers, or even liberal thinkers, were watched closely, and denounced to the authorities during these years. People were accordingly particularly cautious about writing letters to each other on philosophical or theological matters, and such letters as they did write were probably destroyed promptly by the recipients.’]

42. from van Velthuysen to Ostens, 24.1.1671:

Now that I have some free time, at last, I’ll try to give you what you ask for. You ask me to tell you my opinion of the book entitled *Treatise on Theology and Politics*, and I’ll do that as well as I can (within the limits set by the time available and my abilities). I shan’t go into the details, but will try to give a brief account of what the author is saying about religion.

I don't know—and am not interested in knowing—his nationality or how he lives. The argument of his book shows well enough that he is not dull-witted, and that his discussion of the religious controversies among Christians in Europe is neither careless nor superficial. This author has convinced himself that he'll make a better job of examining the opinions that cause men to break into factions and form parties if he sets aside prejudices. So he has worked to free his mind from all superstition; but he has overdone it, and in trying to avoid superstition he has—it seems to me—cast off all religion.

Well, anyway, he doesn't rise above the religion of the deists [see Glossary], of whom there are quite enough everywhere in this wicked age, especially in France. I remember reading Mersenne's attack on them [*L'Impiété des Déistes, Athées, et Libertins, combattue et renversée*]; but few if any of them (I think) have written on behalf of that wicked cause as maliciously, resourcefully and cunningly as the author of this work. Indeed, unless I miss my guess, this man doesn't stay within the bounds of the deists, and leaves men an even narrower scope for worship.

He recognises God and says openly that God is the maker and founder of the universe. But he maintains that the form, appearance and order of the world are completely necessary—as necessary as •God's nature and •the eternal truths that he claims to be true independently of God's will; and thus that everything happens by unconquerable necessity and inevitable fate. He holds this:

For those who think straight, there is no place for •divine• *precepts* and *commands*; human ignorance has introduced such terms in the same way that the common people's lack of knowledge has led them to talk as though God had *feelings*. When God presents eternal truths (and other things that must happen

necessarily) to men as *commands*, he is •merely• accommodating himself to their intellectual level.

Regarding the things commanded by the laws (and thought to be subject to the human will), he teaches •that their happening is as necessary as the triangle's having the nature that it does, and •that therefore these two:

- It is up to us to decide whether to obey the precepts;
- By following or disregarding the precepts men can incur something good or evil;

are no more true than these two:

- God's will is prevailed upon by prayers;
- God •sometimes• changes his eternal and absolute decrees.

So the reason why there are precepts and decrees is that men's ignorance has moved God to provide them for the use of people who can't form more perfect thoughts about God, and who need wretched aids of this kind to arouse in them a zeal for virtue and a hatred of vices. In line with this, the author doesn't mention prayers, or life and death, or any reward or punishment men will receive from the judge of the universe.

In this he is consistent with his principles: what room can there be for a last judgment, and what expectation of reward or punishment, when everything is ascribed to fate and all things are said to emanate from God by an inevitable necessity—or rather, when this whole universe is said to be God? I'm afraid our author is not very far from the latter opinion: maintaining that everything emanates necessarily from God's nature is not very different from maintaining that the universe itself is God.

Still, he places man's supreme pleasure in the cultivation of virtue, which he says is its own reward and a stage for the most splendid things. He holds that the man who understands things rightly ought to attend to virtue, not

•because of God’s precepts and law or •because he hopes for a reward or fears punishment, but •because he is attracted by the beauty of virtue and the gladness of mind man sees in being virtuous.

He maintains this:

God, through the prophets and revelation, exhorts men to virtue by the hope of reward and fear of punishment (two things always connected with laws), because the mind of common men is so made—so badly fashioned—that the only way it can be persuaded to practise virtue is by arguments borrowed from the nature of laws, and from the fear of punishment and hope of reward. Men who judge the matter truly understand that there is no truth or force in arguments of this kind.

It follows from this that the prophets and the holy teachers used arguments that were in themselves false (and so did God, speaking through their mouths); but the author doesn’t think that this matters. He . . . openly and indiscriminately teaches that Scripture wasn’t provided to teach the truth about the natures of the things it talks about, and that it bends things to its purpose of forming men for virtue. Although the nature of the moral virtues and vices was very well known to the prophets, he says, their knowledge wasn’t sufficient to completely shield them, in their activity of trying to rouse men to virtue, from the errors of the common people.

So he further teaches that •the prophets were not free from errors of judgment even when they were warning men about their duty, and that •this doesn’t detract from their holiness and credibility. What they said was governed by a need to accommodate themselves to the preconceived opinions of their audience, arousing men to uncontroversial virtues that no-one has ever been in two minds about. The purpose of a prophet’s mission was to promote the cultivation

of virtue among men, not to teach any truth.

. . . It doesn’t matter much what arguments are used incite us to virtue, the author says, provided that they don’t subvert the moral virtue the prophet is aiming at. He doesn’t think that the mind’s perception of the truth of •things other than virtue is important for piety, because •those things don’t contain moral holiness. He also thinks that knowledge of the truth and even of the mysteries is needed only to the extent that it contributes to piety.

I think the author has in mind a distinction that I believe all theologians accept, between •what a prophet says when he is propounding a doctrine and •what he says when he is simply narrating something. But he is very wrong to think that his teaching agrees with this.

. . . He thinks that all those who deny that reason and philosophy are interpreters of Scripture will agree with him. Everyone can see that countless things said about God in Scripture aren’t true of him, and are merely accommodated to men’s understanding so as to move men to have a zeal for virtue aroused in them; so this author thinks we must choose between these:

- The holy teacher wanted to educate men to virtue by those arguments, not by true ones.
- Every reader of holy Scripture is free to judge of the meaning and purpose of the holy teacher from the principles of his own reason.

He utterly condemns the latter opinion and rejects along with it those who teach . . . that reason is the interpreter of Scripture. He holds that Scripture must be interpreted according to its literal meaning, and that men should not be free to decide, on the strength of their own will and sense of reason, how the words of the prophets are to be understood, so that on the basis of their own reasons and the knowledge they can decide when the prophets are speaking literally and

when figuratively. This has been a digression; I'll return to it later.

Sticking to his principles about the fatal [see Glossary] necessity of all things, the author denies that any miracles occur that are contrary to the laws of nature. . . . That something should happen contrary to the laws of nature is no more possible, he says, than that the angles of a triangle should not be equal to two right angles. God can't bring it about that a lesser weight raises a heavier one, or that a body moving at two miles an hour can catch up to one moving at four. So he maintains that miracles are subject to the common laws of nature, which he says are as immutable as the natures of things, precisely because those natures are contained in the laws of nature. And he doesn't attribute to God any power except his ordinary power that shows itself according to the laws of nature. These, he thinks, cannot be feigned to be different [i.e. we can't *tell a coherent story* about a state of affairs in which the laws of nature are different from what they are in fact], because that would destroy the natures of things and be inconsistent.

A miracle, according to the author, is therefore something unexpected, whose cause the common people are ignorant of. When after prayers have been properly performed it seems that some threatening evil has been warded off or some coveted good obtained, the common people say this results from the power of prayers and from God's special guidance—whereas the author holds that God had already decreed absolutely from eternity that those things would happen that the common people think happen by *his* intervention and the efficacy of prayers. In his view, the prayers are not the cause of the decree; the decree is the cause of the prayers.

All that about fate and the unconquerable necessity of things' natures and behaviour he bases on the nature of

God, i.e. on the nature of God's *•intellect* and *•will*; which have different names, but in God they really converge. He maintains, therefore, that God has necessarily willed this universe and its series of events as necessarily as he knows it. . . . He infers from this that God could no more have founded another universe than he could have destroyed the natures of things and made twice three equal seven. And stories about a supposedly possible universe different from ours are inconceivable not only by us but also, according to the author, by God. [Van Velthuysen's next few sentences repeat what he has just said, with one addition, namely the attribution to 'the author' of the view that:] the natures of the things contained in this universe are necessary, and can't have that necessity from themselves but must have it from the nature of God, from which they emanate necessarily. . . .

All of this, and indeed everything in the first eighteen chapters, is a preparation for what the author presents in the final chapters [19–20], where he tries to get the magistrate [see Glossary] and everyone else to accept this axiom: *It is the magistrate's right to establish what divine worship is to be maintained publicly in the State.*

Next, the magistrate may allow his citizens to think and speak about religion as their hearts and minds dictate to them, and he ought to grant them that freedom even with respect to acts of external worship, as long as this doesn't interfere with their attachment to moral virtues or piety. There can't be any controversy about moral virtue, and (the author says) God can't be displeased by any of men's choices about what to embrace as sacred when moral virtue isn't, whether theoretically or practically, at stake in them.

[In a strikingly repetitive passage, van Velthuysen attributes to 'the author' the view that God is not offended by men's adherence to 'sacred things' which, though they have no moral content or implications, men go in for because they

see them as an aid to virtue. He continues:] To prepare men's hearts to embrace these paradoxes, the author maintains **(1)** that the whole worship instituted by God and given to the Jews—i.e. the citizens of the Israelite State—was intended only so that they could live happily in their State; but **(2)** the Jews were no more precious or pleasing to God than other nations. God repeatedly made this known to them when—through the prophets—he reproached them for their ignorance and error in identifying holiness and piety with

- the worship God had established and commanded them to perform, when it ought to have been identified only with
- zeal for moral virtues, i.e. with the love of God and love of one's neighbour.

And since God had fashioned the heart of all nations with the principles [see Glossary] and (as it were) the seeds of the virtues, so that they judge concerning the difference between good and evil spontaneously, with hardly any instruction; from which the author concludes that God hadn't seen the other nations as lacking the means to obtain true blessedness, but offered himself equally graciously to all men.

Indeed, wanting to make the other nations equal to the Jews in everything that can in any way contribute to achieving true happiness, he maintains that those nations also had true prophets, and he gives examples. Indeed, he insinuates •that God ruled over the other nations through good angels, which in Old Testament fashion he calls 'gods', and •that for that reason the religious worship of the other nations doesn't displease God so long as it isn't so corrupted by human superstition that it draws men away from true sanctity and drives them to religious practices that are inconsistent with virtue. . . .

Taking it for granted that external worship is not pleasing to God *in itself*, the author thinks it matters little what

ceremonies are used in external worship, provided that the worship arouses reverence for God in men's minds and moves them to practise virtue.

Next, since he thinks that

- the main point of all religion lies in the practice of virtue, and
- there's no need for knowledge of mysteries that isn't in itself naturally suited to promoting virtue, and
- the need for knowledge and the power of knowledge are proportional to how much it contributes more to educating men to virtue and arousing them to it,

he infers that all opinions about God and his worship, and about everything pertaining to religion, are to be approved or at least not rejected if their followers think that •they are true and that •what they are *for* is the flourishing of uprightness.

To establish this doctrine he cites the prophets themselves as authors of his opinion and witnesses to it. Having been instructed that God doesn't care what sort of opinions men have about religion—that all worship and opinions are pleasing to God if they come from a desire for virtue and reverence for divinity—they went so far as to present arguments that •weren't true in themselves but •were thought to be true by their audience and •were naturally suited to make them eager for the practice of virtue. Thus, he says that God allowed the prophets to use arguments that •would be adapted to the times and knowledge of the people, and that •they thought good and effective.

He thinks that this is why different divine teachers used arguments that were different from, and often inconsistent with, one another, Paul taught that man is not justified by works, whereas James urged the opposite view. James, the author thinks, saw that Christians took the doctrine of justification by faith in the wrong way, which led him to offer many arguments showing that man is justified by faith *and*

by works. Paul was addressing the Jews, who wrongly placed their justification in the works of *the law*, given specially to them by Moses, which raised them above the other nations. The doctrine of salvation by faith put them on the same level as other nations, depriving them of all their privileges; so they rejected it, and Paul was pushing back against that rejection. James, however, understood that it was not in the interest of the Christians of *his* time to go Paul's way, resting quietly in God's mercy and having almost no concern for good works. Thus, both Paul's teaching and James's contributed greatly to making men apply their minds to piety, each according to *its* circumstances of time and person. . . .

And this is one among many reasons why the author thinks it is quite wrong to set up *reason* as the interpreter of Scripture; and also wrong to interpret one holy teacher through another, because they are of equal authority and the words used by a given teacher are to be explained by *his* tone and linguistic habits. In investigating Scripture's true meaning, the author thinks, we must attend only to the text's literal meaning and not to anything outside it.

Therefore, given that

Christ himself and the other divinely sent teachers showed by their own example that it's only by the practice of the virtues that men proceed to blessedness, and that nothing else is of any importance,

the author infers show that •the magistrate's only concern ought to be that justice and uprightness flourish in the State, and that •he has no business deciding what worship and doctrine are most congruent with the truth; but that he ought to take care that things not be accepted which pose an obstacle to virtue. . . .

So the magistrate can easily, without offence to the divinity, tolerate different forms of worship in his State. To make this convincing, the author addresses the moral virtues

that are concerned with external actions and are useful in society, and maintains that no-one's practice of them should be based on his private judgment and will. He holds that the practice, exercise and modification of the virtues depends on the authority and command of the magistrate, because. . . *which* external acts are virtuous at a given time depends on what good or harm they would do, and this is something that the magistrate is better able to judge than a private citizen.

The author thinks there are also virtues that exist within the mind and are *always* virtues, whatever changes there are in external circumstances. It is *never* permissible to be disposed to cruelty or barbarity, or not to love your neighbour or the truth. But circumstances can arise where it is indeed permissible not indeed to set aside the mind's intention and zeal for those virtues but •to refrain from acting on them or even •to do things which externally seem to be inconsistent with them. So it may stop being the duty of an upright man to state the truth openly and share it with the citizens, if we think that this would do them more harm than good. And although each of us ought to embrace all men in love, and it is never permissible to abandon this affect [here = 'feeling or attitude'], it quite often happens that we can treat certain men harshly without this vice, when it is established that the mercy we are prepared to use toward them will lead to great evil for us.

No-one thinks that it is always suitable to tell any truth, whether it pertains to religion or to civil life, in any circumstances. Someone who teaches that •roses shouldn't be cast before swine if there's a risk that the swine will attack the rose-thrower will also think that •it isn't a good man's duty to educate the common people on certain fundamental religious principles if there's a risk that this will disturb the State or the Church in a way that does it more harm than good.

Moreover, civil societies. . . don't leave it to individuals to decide what would be useful to the community; they leave such decisions to the rulers. The author tries, on that basis, to show that •the magistrate has the right to decide what doctrines and what *kinds of* doctrines ought to be taught publicly in the State, and that •it's the duty of the subjects to refrain from outwardly teaching and professing doctrines about which the magistrate has legally decreed that there ought to be public silence. God didn't leave this to the judgment of private individuals any more than he allowed them to. . . do things that would mock the force of the laws and frustrate the magistrates. The author thinks that. . . it's as safe leave to the magistrate's judgment •the choice of external acts of divine worship as to grant him •the right and power to appraise an injury done to the State and to punish it by force. The author holds that just as

If the magistrate judges that a given act is harmful to the State, a private individual is obliged to *act* in accordance with that judgment; but he is entitled to have his own *opinion* about whether the judgment is right,

so also

When the magistrate judges what doctrines ought to be publicly propounded, a private citizen is obliged to refrain from outwardly contradicting any of those doctrines and from *doing* anything else that would prevent the magistrate's laws about worship from having their force; but he isn't obliged actually to *believe* any of those doctrines.

It can happen that a magistrate disagrees with many of the common people on the basic principles of religion, and wants certain things to be publicly taught that go against their judgment, because he thinks such teaching is important for the divine honour. The author sees in

this that a difficulty remains: great harm could be done to the citizens because the magistrate's judgment differs from theirs. So he adds a further thesis which calms the minds of the magistrate and of his subjects, and preserves freedom of religion intact: the magistrate doesn't have to fear God's anger if he permits what he thinks are improper religious practices to occur in his State, provided they don't subvert or conflict with moral virtues.

The reason for this opinion cannot escape you, since I have already fully explained it above. The author maintains that God doesn't care what kind of opinions men cherish in religion, . . . or what kind of religious practices they publicly engage in, because all these things ought to be regarded as having nothing in common with virtue or vice—although everyone has a duty to conduct his reasoning in such a way that he holds those doctrines, and engages in that worship, with which he thinks he can make the greatest progress in the practice of virtue.

Here, Sir, you have a brief account of the main points of the teaching of the theologico-politician. In my judgment it destroys and completely subverts all worship and religion, and either •secretly introduces atheism or •invents a God who can't move men to reverence for his divinity. Because he himself is subject to fate, there's no room for any divine governance or providence, and the author takes away all distribution of punishments and rewards. At least it's easy to see from the author's writing that the authority of the whole of sacred Scripture is broken by his reasoning and arguments, and that he mentions it only for form's sake, because it follows from his position that the Koran is equal to the Word of God. He doesn't have a single argument to show that Mohammed was not a true prophet, because •the Turks also. . . cultivate moral virtues that there's no dispute about among the nations, and (according to the author's

teaching) •it is not uncommon for God to draw nations that didn't receive the oracles given to the Jews and Christians into the circle of reason and obedience, doing this by other revelations.

So I don't think I am deviating far from the truth, or doing the author any injustice, if I denounce him for using covert and counterfeit arguments to teach pure atheism.

43. to Ostens, ii.1671:

You'll be surprised that I have kept you waiting for so long, but until now I have hardly been able to put my mind to replying to that man's pamphlet [namely letter 42, immediately above], which you were pleased to send me. I'm replying only because I promised to; and I'll keep that promise in as few words as I can, showing briefly how wrongly he has interpreted my intention. Whether he did this from malice or from ignorance I can't easily say.

First, he says that he is not much interested in knowing my nationality or my way of life. If he *had* known, he wouldn't so easily have persuaded himself that I teach atheism. Atheists are accustomed to seek honours and riches immoderately, but I have always scorned them, as everyone who knows me knows. Next, to prepare the path to his goal he says that I am not dull-witted, so that he can more easily persuade people that I have written resourcefully and cunningly, and maliciously, for that most wicked cause of the Deists. This shows well enough that he hasn't understood my arguments. For who can be so intellectually resourceful as to give so many valid arguments for something he regards as false? . . . I'm not surprised now because this is how Voetius once defamed Descartes, and how the best men are always maligned.

Next, he continues: 'In trying to avoid superstition he has cast off all religion.' I don't know what he understands by 'religion' or by 'superstition'. Is someone casting off all religion when he maintains that

- God is to be recognised as the highest good, to be freely loved as such; that
- our greatest happiness and freedom consist only in this; that
- the reward of virtue is virtue itself, whereas the punishment of folly and weakness is folly itself; and that
- each person ought to love his neighbour and obey the commands of the supreme power?

I explicitly said these things, and have also proved them by the strongest arguments.

But I think I see what mud this man is stuck in. He takes no delight in virtue or in understanding, and would prefer to live according to the impulse of his affects if he weren't inhibited by the fear of punishment. So he abstains from evil actions and obeys the divine commandments in the way a slave does, reluctantly and half-heartedly; and he expects God to load him down with gifts far more pleasant to him than the love of God. . . . He believes that anyone who isn't held back by this fear lives without restraint and casts off all religion!

Enough of that. I pass to the deduction he uses to show that I teach atheism by covert and counterfeit arguments. His basic point is that I take away God's freedom and subject him to fate, which is certainly false. Consider these:

- (1) God's understanding of himself follows necessarily from his nature.
- (2) Everything follows necessarily from God's nature.

Everyone accepts (1), but no-one thinks of God forced by some fate to understand himself; everyone thinks that God understands himself completely freely, even if necessarily.

Well, I maintain **(2)** as a truth of the same kind as **(1)**. This is all quite obvious. If he believes these things are said with an evil intention, I wonder what he thinks about his Descartes, who maintained that

•everything we do was previously preordained by God,
who indeed re-creates us (as it were) at each moment,

and that nevertheless

•we act from the freedom of our will

[*Principles of Philosophy* I: 39–41]. Surely, as Descartes himself admits, no-one can comprehend this.

Next, this inevitable necessity of things doesn't destroy either divine laws or human laws. Moral teachings, whether or not they take the form of a law from God himself, are still divine and salutary [see Glossary]. As for the good that follows from virtue and divine love, *how* good it is doesn't depend on whether it •comes from God as a judge or •emanates from the necessity of the divine nature. And on the other side, the evils that follow from evil actions are not less to be feared because they follow from them necessarily. Finally, whether we do what we do necessarily or freely, we are still led by hope or fear. So he speaks falsely when he attributes to me the view that

all things are ascribed to fate and emanate with
inevitable necessity from God,

and infer from this that

there's no place for precepts and commands, no ex-
pectation of reward or punishment.

I don't ask here why maintaining that •all things emanate necessarily from God's nature is little if at all different from maintaining that •the universe itself is God. But do notice the equally odious thing that he quickly adds, namely that I do not hold that man ought to attend to virtue because of God's precepts and law, or because he hopes for a reward or fears punishment, but. . . etc. You won't find this anywhere

in my treatise. On the contrary, I said explicitly in chapter 4 that the chief precept in the divine law (which as I said in chapter 12 has been inscribed divinely in our mind) tells us to love God as the greatest good, not from fear of punishment (for love can't arise from fear), nor from love of anything else (for then we would be loving not God but the other thing), and I showed in the same chapter that God revealed this very law to the prophets. And I maintain that whether we take that law to be •something that God himself issued as a law or rather to be •something which, like the rest of his decrees, follows necessarily from his nature, it will still be God's decree and a salutary teaching, either way; and whether I love God freely or from the necessity of God's decree, I shall nevertheless love God and shall be saved.

That man is one of those of whom I said in my preface that I would rather they ignored my book than troubled me by interpreting it perversely, as they usually do everything. While they do themselves no good, they harm others.

That's really all I need to say in support of my views; but it may be worthwhile for me to note a few things further.

(1) He is wrong to think that I had in mind that axiom of the theologians who distinguish between the speech of a prophet who is propounding a doctrine and that of one who is simply narrating something. If he is referring to the axiom I attributed to Alpakhar in chapter 15, how could I think that mine agrees with it when I rejected it as false in the same chapter? If he is referring to something else, I don't know what it is, and so couldn't have had it in mind.

(2) I don't see why he says I think everyone who denies that reason and philosophy are the interpreter of scripture will follow my opinion. For I refuted their opinion as well as that of Maimonides.

It would take too long to enumerate all the passages where he shows that he hasn't approached my work with

a completely dispassionate mind; so I pass straight to his conclusion, where he says **(3)** that I have no argument left to me by which I might prove that Mohammed was not a true prophet. He tries to show this from my opinions [i.e. to show that Spinoza's opinions imply that Mohammed *was* a true prophet], although it clearly follows from them that Mohammed was an impostor, because he completely takes away the freedom that the universal religion concedes, following the natural light and what the prophets revealed—a freedom that I have shown absolutely ought to be granted.

But even if this were not the case, I ask you: am I bound to show that someone is a false prophet? Surely the contrary is true: that the prophets were bound to show that they were true.

If he replies that Mohammed also taught the divine law and gave certain signs of his mission, as the other prophets did, he'll have no reason to deny that Mohammed was a true prophet. Also, if the Turks and other nations worship God with the practice of justice and with loving-kindness toward their neighbour, then they have the spirit of Christ and are saved, whatever they ignorantly regard as settled concerning Mohammed and the oracles.

There, my friend, you see how far that man has wandered from the truth. When he unblushingly says that I teach atheism by covert and counterfeit arguments, he is harming himself, not me.

I don't think you will find that I have spoken too harshly against that man; but if you do find anything too harsh, I beg you to delete it or (if you prefer) correct it. Whoever he turns out to be, it is not my intention to provoke him and make an enemy of him. Just because this often happens in such debates, I could hardly get myself to reply, and I wouldn't have succeeded if I hadn't promised. I commit this letter to your prudence.

44. to Jelles, 17.ii.1671:

Professor... told me recently that he had heard that my *Treatise on Theology and Politics* has been translated into Dutch, and that someone (he didn't know who) planned to have it printed. *Please* find out about this, so as to prevent the printing if that is possible. This request comes not only from me but also from many of my friends, who don't want the book be prohibited, which it doubtless will be if it is published in Dutch. I don't doubt that you will do me and the cause this service. [The translation wasn't published in Spinoza's lifetime, 'no doubt in deference to Spinoza's wishes', Curley says in a note.]

Some time ago one of my friends sent me a little book entitled *Homo Politicus* or *Political Man*, which I had previously heard a lot about. I read it, and found it to be the most harmful book men can devise. The author's supreme good is money and honour. He fits his teaching to those goals and shows how to reach them: by rejecting all religion internally, by externally professing whatever can most serve your advancement, and by not being true to anyone except when it's to your advantage. He values most highly hypocrisy, promising without giving, lying, false oaths, and many other things.

I thought about writing a little book indirectly against this, in which I would •treat of the supreme good, •show the anxious and miserable condition of those who are eager for money and honour, and •show by clear reasoning and many examples that States with an insatiable desire for honour and money are bound to perish, and have in fact done so.

The thoughts of that author are much inferior to those of Thales of Miletus, as I'll now show you. Thales offered the following argument:

- All things are common among friends;
- the wise are friends of the gods;
- all things belong to the gods;

therefore

- all things belong to the wise.

That's how this very wise man made himself the richest of all—by nobly scorning wealth rather than by greedily pursuing it. On one occasion he showed that it's by choice and not by necessity that the wise have no wealth. When his friends reproached him for his poverty, he said: 'Do you want me to prove that I can acquire what I consider unworthy of my labour, and what you seek so greedily?' When they said 'Yes', he leased all the olive-presses in Greece, getting them cheaply because for several years there had been a shortage of olives. Being very experienced in the movement of the stars, he had seen that in that year there would be an abundance of olives; when it came, people needed presses to deal with the oil, and Thales leased them out at a high price. Thus, in one year he acquired great wealth for himself, which he subsequently shared with as much generosity as he had shown cleverness in acquiring it.

45. from Leibniz, 3.x.1671:

Among the other praises common report has bestowed on you, I understand that you also have outstanding skill in optics. For that reason I want you to see the enclosed essay, such as it is, because I won't easily find a better critic for this sort of study. I call it *A Note on Advanced Optics*, and have published it so that I could more conveniently share it with friends or with those interested in the subject. I hear also that Hudde is distinguished in this kind of study, and no doubt he is well known to you. So you would add

wonderfully to your kindness if you also got me his judgment and good-will. . . .

I believe you have received Francis Lana's *Prodromus*, written in Italian, where he also proposes some excellent things in dioptrics. But a young Swiss named Oltius, who is very erudite in these matters, has also published *Physico-Mechanical Thoughts on Vision*, in which he •promises a simple and general instrument for polishing lenses of every kind, and also •says he has found a certain way of collecting all the rays coming from all the points on an object, into as many other corresponding points—but only for an object at a certain distance and of a certain shape.

What I have proposed comes to this: not that all the rays of all the points are gathered again—for as far as we know this is impossible for any object, whatever its distance and shape—but that the rays of the points outside the optic axis, as well as the rays of points on the optic axis, are gathered, and therefore, that the apertures of the lenses can be made as large as you wish without loss of clear vision. But these matters will await your most acute judgment. . . . Your unremitting admirer, Gottfried Wilhelm Leibniz, Doctor of Laws and Councillor of Mainz

PS.: If you think me worthy of a reply, the lawyer Diemberoeck will (I hope) be happy to take charge of it. I think you have seen my *New Physical Hypothesis*. If not, I shall send it.

46. to Leibniz, 9.xi.1671:

I have read the paper you kindly sent me, and thank you for sharing it with me. You explain your line of thought clearly enough, I believe, but I haven't been able to follow it adequately. I hope you won't mind replying to me about these few matters:

(1) Why ought we to make the aperture of lenses small? Is it *only* because the rays from one point don't meet exactly in another point but in a small space that we call a 'mechanical point', whose size varies with the size of the aperture?

(2) Do the lenses that you call 'Pandochal' [= 'capable of receiving all the rays of light'] correct this fault? That is, does the mechanical point—i.e. the small space in which the rays coming from one point meet after refraction—remain the same size, whether the opening is large or small? For if those lenses do this, it will be possible to increase their aperture as much as you like, which will make them far better than any other figures known to me. If not, I don't see why you regard them as so far superior to the common lenses. For circular lenses have the same axis everywhere. So when we use them, all the points on the object are to be considered as lying on the optical axis, and although not all the points on the object are at the same distance, nevertheless, the difference which arises from that cannot be sensed when the objects are very remote, because then the rays coming from the same point are considered as if they entered the lens parallel to one another.

But I do think that when we want to take in several objects in one glance (as when we use large convex ocular lenses), your lenses can help to represent all the objects at once more clearly. But I shall suspend judgment about all these things until you explain your thinking to me more clearly. I beg you to do this.

As you wished, I have sent the second copy to Hudde, who hopes that within a week or two he will have time to examine it.

Lana's *Prodromus* has not yet reached me. Neither has Johan Holt's *Physico-mechanical Thoughts on Vision*. What I regret more is that I haven't been able to see your *Physical Hypothesis*—it isn't for sale here in the Hague. If you send it

to me, you will make me most grateful. I'll be glad to be of service to you in anything at all. . . .

PS: Diemerbroeck doesn't live here, so I'm forced to give this to the ordinary carrier. No doubt you know someone here in the Hague who would be willing to take care of our correspondence. I would like to know who that is, so that letters can be managed more conveniently and securely. If the *Treatise on Theological and Politics* hasn't yet reached you, I shall send a copy, if you don't mind.

47. from Fabritius, 16.ii.1673:

His most serene highness the Elector Palatine, my most gracious lord, has commanded me to write to you—whom I haven't known until now, but who has been highly recommended to his most serene highness—to ask whether you would be inclined to take up an ordinary professorship of philosophy in his renowned university. You will receive the annual salary ordinary professors enjoy today. Nowhere else will you find a prince more favourable to men of outstanding intellect, among whom he judges you are one. You will have the most ample freedom to philosophise, which he believes you won't abuse to disturb the publicly established religion.

I beg you most earnestly to reply to me as soon as possible, and to give your reply either to his most serene highness's resident in the Hague, Grotius, or to Gilles van der Hek, to be forwarded to me in the packet of letters that is usually sent to the court. Or use whatever other means seems most convenient.

I add this one thing: that if you come here you will live pleasantly a life worthy of a philosopher, unless everything else turns out contrary to our hope and expectation.

48. to Fabritius, 30.iii.1673:

If I had ever wanted to take up a professorship in any faculty, I couldn't have wished for a better one than the one that is offered to me, through you, by his most serene highness the Elector Palatine, especially because of the freedom of philosophising that your most gracious prince is willing to grant, not to mention the fact that I have long wished to live under the rule of a prince whose wisdom all admire.

But I have never planned to teach publicly, so I can't be persuaded—although I have weighed the matter for a long time—to embrace this excellent opportunity. For one thing, if I devoted myself to educating young men, I would stop advancing in philosophy. Also, I don't know what the limits of that freedom of philosophising might have to be, for me not to seem to aim at disturbing the publicly established religion. Schisms arise not so much from ardent zeal for religion as from men's varying affects [see Glossary], or their eagerness to contradict one another, which results in their tending to distort or condemn everything, even things that are rightly said. Having experienced these things already while leading a private and solitary life, how much more I would have to fear them after rising to the rank of professor.

You see then, Sir, that I'm holding back not because I hope for a better offer but from a love of tranquillity, which I believe I can in some manner obtain if I abstain from public lectures. Please entreat his most serene highness the Elector to let me deliberate further about this matter, and continue to procure the most gracious prince's favour towards his most devoted supporter. . . .

[That is the last we hear of this offer.]

48a. from Jelles (to Spinoza?), early 1673:

I have more readily granted your earnest request to write to you about my faith or religion after you explained that you were urging me to do this because some people are trying to convince you that the Cartesian philosophers (among whom you are pleased to count me) cherish a strange opinion, falling into ancient paganism, and that their propositions and fundamental principles run contrary to the fundamental principles of the Christian religion and piety, etc.

Let me say first, by way of preface, that the Cartesian philosophy touches religion so little that Descartes's propositions are followed not only by various Protestant denominations but also by the Roman Church; so what I say about religion is only my personal opinion and not that of Cartesians in general. I don't want to get into a dispute with others or to silence the slanderers, but what I say will be enough for me to satisfy you and those like you. I didn't set out to prescribe a universal creed or define the essential, fundamental and necessary articles of belief, but only to tell you my personal opinion; but I shall do my best to fulfill the conditions that Jacob Acontius says must be satisfied by a universal Confession acceptable to all Christians, namely that it must contain only

- what necessarily must be known,
- what is very true and certain,
- what is certified and corroborated by evidence, and
- what as far as possible is expressed in the same words and ways of speaking that the Holy Ghost used.

Here, then, you have a Confession that seems to me to be of that kind. Read it attentively. Don't judge it rashly. And be assured that as I have pursued the truth, so shall I try to impart it to you in this letter. [The rest of Jelles's Confession is omitted, except for the conclusion, which follows.]

I'm confident that I have now done more than you had expected, and that therefore you'll be satisfied. . . .

In return I ask you only to consider what I have said carefully and prudently, and then to judge what there is in the reports people have given you about my opinions in religion.

If you come across anything in this that seems false or contrary to Scripture, please tell me, and also let me know why it seems so to you, so that I can investigate it. Those who consider something to be contrary to Scripture and false if they find it contrary to their catechisms or confessions of faith will doubtless judge that much of my letter is of that kind. But I'm confident that those who test it according to the truth—which I have shown here to be the only unerring rule or touchstone of. . . .orthodoxy and unorthodoxy—will judge differently about this. I also expect this of you.

Here, now, you have my opinion as far as the Christian religion is concerned, and with it the proofs and arguments on which it rests. It is now up to you to judge whether those who build on such a foundation, and try to live according to such knowledge, are Christians or not, and what truth there is in the reports that some have given you about my opinion. . . .

48b. reactions to the above, a little later:

from Jan Rieuwertsz:And although some who misunderstood Jelles's meaning ascribed a strange opinion to him, nevertheless he—considering this more worthy of pity than of anger—proceeded continually to penetrate more and more into the love and knowledge of God, achieving a level of spiritual understanding that few men have reached. That slander was the reason why he sent this confession to a certain friend living outside the city, asking for his judgement

on whether his opinion agreed with the truth of the matter. His friend replied: I have read through your writing with pleasure, and can find nothing in it that I would change.

from Pierre Bayle: He (·Spinoza·) openly professed the Gospel and attended the assemblies of the Mennonites or those of the Arminians in Amsterdam. He even approved a confession of faith which one of his close friends communicated to him. . . .When a certain Jarig Jelles was suspected of various heterodoxies, he believed that to justify himself he ought to publish a confession of his faith. Having prepared it, he sent it to Spinoza asking for his opinion of it. Spinoza replied that he had read it with pleasure and found nothing in it he would want to change. . . .

from Hallman: More letters had been found than had been printed. But they were of no importance, and so were burned. But he (·Jan Rieuwertsz·) had at least preserved one letter,. . . .which I persuaded him to show to me. It was on a half sheet, quite short, and written in Dutch. The date was 19.iv.1673, from the Hague, and the letter was addressed to Jarig Jelles, who had sent him his confession of a universal Christian faith and asked his judgment about it.

In this reply Spinoza didn't give him any praises, or even much approval, but reported to him only that he could make one objection to it. For when Jelles claimed that

man is inclined by nature to evil, but through God's grace and the spirit of Christ becomes indifferent to evil and good,

this was self-contradictory, Spinoza said, because he who has the spirit of Christ in this way must necessarily be impelled only to the good. . . .

49. to Graevius, 14.xii.1673:

[A letter asking to be sent ‘the letter about Descartes’s death that I think you copied some time ago’.]

50. to Jelles, 2.vi.1674:

As far as politics is concerned, the difference between Hobbes and me that you ask about consists in this: I always preserve natural right intact, and hold that in each State the supreme magistrate’s [see Glossary] •right over the subjects is proportional to the superiority of his •power over them. This is always the case in the state of Nature.

As regards the thesis that I defend in the *Metaphysical Thoughts*, namely that it is very improper to call God *one* or *unique*: . . . We don’t conceive things under numbers unless they have first been brought under a common genus. Someone who holds a penny and a dollar in his hand won’t think of *two* unless he can call them by a single name such as ‘coins’. When he does that, he can say that he has *two coins*, calling each by the name ‘coin’. This shows clearly that a thing is called ‘one’ or ‘unique’ only after another thing has been conceived that (as they say) ‘agrees with it’. . . . It is certain that someone who calls God ‘one’ or ‘unique’ does not have a true idea of God, or is speaking improperly about him. [The two ellipses replace, respectively, ‘A thing is said to be “one” or “unique” only in relation to its existence, not in relation to its essence’ and ‘The existence of God is his essence, and we cannot form a universal idea concerning his essence.’]

As for shape being negative rather than positive: it is obvious that the whole of matter, considered indefinitely, can’t have a shape—that only finite and determinate bodies can have shapes. Someone who says that he conceives a shape is merely saying that he conceives •a determinate thing

and •how it is determinate. So this determination isn’t a fact about the thing’s *being* but its *non-being*. Therefore, because the shape is nothing but a determination, and determination is (as they say) a negation, it cannot be anything but a negation.

I have seen in a bookseller’s window the book the Utrecht professor •van Mansvelt• wrote against mine, which was published after his death. From the little I read then I judged that it wasn’t worth reading, much less answering. So I left the book lying there, and its author with it. I thought with amusement about how the most ignorant people are generally the boldest and the readiest to write. It seems to me that the [gap in original] offer their wares for sale in the way shopkeepers do, showing the worst goods first. The Devil is said to be a very cunning fellow, but *their* minds far surpass his in craftiness, it seems to me.

•EXCHANGE WITH BOXEL ABOUT GHOSTS• [to page 84]

51. from Boxel, 14.ix.1674:

I am writing you this letter because I want to know your opinion about apparitions and spirits or ghosts—what you think about them (if there are any), and how long their life lasts (some think they are immortal, others deny this). Not being sure that you even grant that there *are* any, I shan’t proceed further •with questions about their nature•.

But the ancients certainly believed in them. Modern theologians and philosophers still believe such creatures exist, though they disagree about their essence. Some say they’re made of a very thin, fine matter; others that they are spiritual. But. . . you and I disagree greatly about this because I doubt whether you grant that they exist, although as you know there are so many examples and stories in all antiquity that it will hard to deny or doubt their existence.

One thing is certain: even if you don't deny that they exist, you don't think that any of them are the souls of the dead, as the Catholics profess. Here I shall stop, and await your reply. I shall say nothing about the war, nothing about the rumours; these are the times we live in.

52. to Boxel, 16–20.ix.1674:

Yesterday I received your letter, which was very welcome to me, as much because I wanted to hear some news from you as because I see that you haven't yet completely forgotten me. Some might think it an evil omen that your reason for writing to me was ghosts or spirits; but I . . . can get advantage not only from true things but even from trifles and imaginations.

Let us set aside the question of whether there are ghosts, phantasms, and imaginations, because you find it extraordinary to deny that there are such things or even to doubt them, because so many stories have been told about them by the ancients and the moderns. The great respect I have always had for you, and still have, doesn't permit me •to contradict you outright•, much less to flatter you •by pretending to agree•. I shall take a middle course: of the many stories you have read about ghosts, please choose one or two that •are least subject to doubt and •most clearly prove that there are ghosts. Frankly, I have never read one credible author who showed clearly that they exist. I still don't know what they are—no-one has been able to tell me.

If experience has shown us clearly that a certain thing exists, we must know *what it is*. Without that knowledge we'll find it hard conclude from some story that there are *ghosts*, rather than that there is *something but we don't know what*. If the philosophers want to call the things we don't know 'ghosts', I can't deny them that, because there are countless things that I have no knowledge of.

. . . Also, please tell me what sort of things these ghosts or spirits are. Are they children, fools, or madmen? From what I've heard about them, their actions seem to be those of the brainless, rather than of intelligent men. The best we can say of their actions is that they are like children's games or the pastimes of fools.

One last point: stories of spirits and ghosts are prime examples of men's desire to tell things not as they are but as they want them to be. The chief cause of this, I believe, is that a story of this kind has no witness but the story-teller, so that he can add or omit details at his pleasure, without needing to fear that anyone will contradict him. They invent these things primarily as a way of •dealing with their fears about their dreams and phantasms, or of •strengthening their courage, faith and beliefs. I have other reasons, too, for doubting these stories or at least the details that the story-tellers find it *convenient* to include in them.

I shall stop here, until I know which stories have so convinced you that you think it's absurd even to doubt them.

53. from Boxel, 21.ix.1674:

You answered as I expected you to, as a friend and as one who has different opinions. The difference is of no importance, for friends can disagree about non-moral matters without harm to the friendship.

Before you explain yourself, you want me to say what sort of things ghosts are, whether they are children, fools, or madmen, etc., and you add that from what you have heard about them they sound more like fools than intelligent men. The old saying is true: a preconceived opinion hinders the investigation of the truth.

I have four reasons for believing that there are spirits:

- (1) Their existence increases the beauty and perfection of the universe.
- (2) The Creator has probably created them because they are more like him than corporeal creatures.
- (3) Because there is a body without a spirit, there must also be a spirit without a body.
- (4) I think that every dark body—i.e. every heavenly body that shines only with reflected light—in the upper air (or place or space) has inhabitants; and consequently that the immeasurable space between us and the stars is not empty but full of inhabitants, which are spirits. The highest and uppermost are true spirits; the lowest, in the nearest air, may be made of a very finely divided and thin corporeal substance, and also invisible.

So I think there are spirits of every kind, except that possibly there are no female spirits. I realise that this reasoning won't convince those who think that the world has been made by chance.

Apart from these reasons, daily experience shows that there are spirits; there are many stories of them, ancient and modern, right up to today. These stories are told by Plutarch in his treatise on famous men and elsewhere, by Suetonius in his *Lives of the Caesars*, by Wierius in his books on ghosts, and also by Lavaterus, who has discussed this topic at length, drawing from all the other writers. As also Cardanus, so renowned for his learning, in the books on *Subtlety* and *Variety* and in his autobiography, where he presents his own experiences and those of the friends and relations to whom spirits appeared. Melancthon, a lover of the truth and an intelligent man, and many others are witnesses of their own experiences.

A learned and wise man who is still alive told me once that in his mother's brewery people heard things happening at night like the day-time events of brewing. He swore to me that this happened several times. I myself have had several such experiences that I shall never forget. So I am convinced that there are spirits.

As for devils, who torment wretched men in this life and afterwards, that's another issue—as is everything involving witchcraft. The stories people tell about these things are fables.

[Boxel refers Spinoza to 'works on spirits' for examples, and then gives detail references to Pliny the younger, Suetonius, Valerius Maximus, and Alexander ab Alexandro,] for I believe you have those authors at hand.

I am not speaking about monks or clerics, who tell of so many apparitions and visions of souls, spirits and devils, and tell so many stories—fables, really—about ghosts that they bore one and one loathes to read them. Thyraus, a Jesuit, treats the same things in the book he calls *Apparitions of Spirits*. But those people do this only for their own profit, and to prove the existence of purgatory, which is a mine from which they extract so much silver and gold. One does not find this in the authors mentioned above and in others of the present day, who are beyond all passions, and therefore, so much the more to be believed.

As a reply to your letter, where you speak of fools and lunatics, I place here the conclusion of the learned Lavaterus's first book on spirits: 'He who dares to reject so many agreeing witnesses, both ancient and modern seems to me not worth believing when he affirms anything. Just as it is a mark of rashness to immediately believe all those who say that they have seen ghosts, so it would be a great impudence to contradict rashly and without shame so many credible historians, church fathers, and other great men.'

54. to Boxel, x.1674:

Relying on what you say in your letter of 21.ix—that friends can disagree over non-moral matters and still remain friends—I shall say clearly what I think about the arguments and stories from which you infer that there are all kinds of spirits, but perhaps none of the feminine kind. I haven't replied earlier because I don't have the books you cite at hand, and haven't yet found any of them except Pliny and Suetonius. But these two will relieve me of the trouble of looking for the others, because I believe they're all raving in the same way, loving unusual tales and things that make men amazed and astonished. I'm astonished not by the stories but by the people who tell them; that men of intellect and judgment squander and abuse their eloquence to make us believe such trifles—it's amazing!

But let us leave the authors and tackle the thing itself, starting with the conclusion you draw. Either

- My denial that there are ghosts or spirits shows that I don't properly understand the writers who have written about this, or
- You, who maintain that they exist, are giving these writers more respect than they deserve.

Let us see which of these is right.

You are sure there are spirits of the male kind, but doubt that there are spirits of the female kind. This seems to me to be more like a whim than a doubt. If it was your serious opinion, it would look like the common people's fancy that God is male, not female. I'm surprised that those who have seen spirits naked haven't looked at their genitals—were they afraid? or did they not know of the difference between male and female?

You will answer that this is mockery, not reasoning, and that shows me that your reasons seem to you so powerful

and well-founded that no-one can contradict them except someone who mistakenly thinks that the world was made by chance. Before investigating the reasons you have given, then, I need to state briefly my opinion about whether the world was created by chance.

Chance and necessity are contraries: someone who says that

- the world was produced necessarily from the divine nature

is absolutely denying that it was made by chance; but someone who says that

- God could have refrained from creating the world

is saying, though in different words, that it *was* made by chance, because it has come from a choice that could have not been made. And because this opinion. . . is completely absurd, everyone agrees that God's will is eternal, and has never been indifferent [i.e. has never been such that it could have gone either way]. So everyone should also agree (**attend to this** carefully) that the world is a necessary effect of the divine nature. They may call this nature 'will', 'intellect', or whatever they want to; but they end up seeing that it is one and the same thing in different words. For if someone asks them whether the divine will differs from the human will, they answer that the two have nothing in common except the name; and indeed they commonly grant that God's will, intellect, being or nature is one and the same thing; just as I, to avoid confusing the divine nature with the human, ascribe to God no human attributes such as will, intellect, attention, hearing, etc. So, I repeat, the world is a necessary effect of the divine nature, and was not made by chance.

. . . .On this basis I proceed to investigate your reasons for concluding that there are spirits of all kinds. . . .

(1) You argue that the existence of spirits contributes to the beauty and perfection of the universe. But beauty is not

so much a quality of the seen object as an effect it has on the viewer. If our eye was longer or shorter, or our constitution was different, the things we now consider beautiful would seem ugly, and those that are now ugly would seem to us beautiful. The most beautiful hand looks terrible when seen through a microscope. Some things are beautiful when seen from a distance and ugly when seen close up. If you say that God has made the world beautiful, you must maintain either that

- God made the world according to the tastes and eyes of men

or else that

- God made the tastes and eyes of men according to the world.

Take your pick. I don't see why God had to create ghosts or spirits to achieve either of these results.

'Perfection' and 'imperfection' are labels that don't differ much from 'beauty' and 'ugliness'. Not to be too wordy, I ask what would the existence of spirits—or of any sort of monsters such as centaurs, hydras, harpies, satyrs, griffins, arguses or the like—contribute to the decoration and perfection of the world? Decorating the world according to the liking of our imagination, fitting it out with things that we can easily imagine and dream but can't ever understand—a fine adorning of the world *that* would be!

(2) You argue next that because spirits are more like God than corporeal creatures are, it is probable that God created them. I still don't know, I admit, *how* spirits are more like God than other created things are. I do know that there is no proportion between the finite and the infinite, so that the difference between the most excellent creature and God is the same as that between the least creature and God. So this argument doesn't accomplish anything for your purposes.

If I had as clear an idea of spirits as I have of the triangle or the circle, I wouldn't hesitate to say that God created them. But because my idea I have of them agrees completely with the ideas I find in my imagination of harpies, griffins, hydras etc., I can't consider them as anything but dreams that are as unlike God as being is unlike not-being.

(3) Your third argument—that because there is a body without a spirit, so there must also be a spirit without a body—seems to me no less absurd. Do you also think it probable that there are such things as memory, hearing, sight, etc. without bodies, because there are bodies without memory, hearing, sight, etc.? or that there is a sphere without a circle because there is a circle without a sphere?

(4) You end with an argument that is the same as the first; see my reply to that. My only comment here is that I don't know what the 'high' and 'low' places are that you conceive in the infinite material world, unless you think that the earth is the centre of the universe. If the sun or Saturn is the centre of the universe, then the sun or Saturn will be the 'lowest' place, not the earth.

... These arguments and others like them won't be able to persuade anyone that there are ghosts or spirits of any kind, except those who close their ears to their intellect and let themselves be seduced by superstition, which is so hostile to reason that it prefers to diminish respect for the philosophers by believing old wives' tales.

As for the stories, I said in my first letter that I don't deny them outright; I only deny the conclusion drawn from them. I add now that I don't consider them so credible that I accept many of the details they often add, not so much for •the truth of the story as to •decorate it or •make it a better basis for the conclusion they want to draw.

I had hoped that out of so many stories you would have produced at least one or two that one couldn't in the least

doubt, and that clearly showed that there are spirits or ghosts. The man who thought that ghosts exist because of what he heard in his mother's brewery—that is laughable! It would take too long here to investigate all the stories written about these trifles. I'll just say this: Julius Caesar, who is reported by Suetonius as mocking such things, had a successful life. . . . All those who weigh the effects of human imaginings and affects must also laugh at such things, whatever is said against them by Lavaterus and others who share his dreams about this matter.

55. from Boxel, x/xi.1674:

I'm replying to your letter later than I had intended to, because a slight illness has taken away my pleasure in studying and meditating, and prevented me from writing to you. Now, thank God, I'm healthy again. In my reply I shall track through your letter, skipping your outbursts against those who write about spirits.

I say that there are no females among them because I deny the procreation of spirits; I say nothing about their shape and composition because this doesn't concern me.

Something is said to have been made by chance when it doesn't originate from an agent's intention. When someone digging to plant a tree finds an unexpected treasure, we say that this happened 'by chance'. Someone who acts of his own free will, being able either to act or not to act, is never said to act 'by chance'. Otherwise men would *always* act by chance, which would be absurd. The necessary and the free are contraries, but the necessary and the by-chance are not. The divine will is indeed eternal, but it doesn't follow from this that the world is eternal, because God could determine •from eternity to make the world •at a certain time.

You deny that the divine will has ever been indifferent, a position I reject. And it isn't necessary to **attend to this** as carefully as you think. Nor do all men say that God's will is necessary. . . ., because when we ascribe a will to someone we means that he acts according to his will and can refrain from acting. If we ascribe necessity to him, we are saying that he cannot refrain from acting.

Finally, you say that you don't admit any human attributes in God, so as not to confuse the divine nature with the human. So far, so good; for we can't conceive *how* God acts, or how he wills, understands, perceives, sees, hears, etc. But if you completely deny these actions, and all our highest speculations about God, and say that they are not even in God eminently [see Glossary] and metaphysically, then I don't know what sort of God you have, or what you understand by 'God'.

We shouldn't deny something just because we don't grasp it. The soul, which is a spirit and incorporeal, can act only with the help of the most subtle bodies, the humours. And what proportion is there between a body and a spirit? *How* does the soul act with the help of bodies? . . . You can't answer this, and nor can I. But we see and feel that the soul acts, even if we don't grasp how it does so. Similarly, though we don't grasp how God acts and don't want to ascribe human acts to him, we mustn't let that lead us to deny that his actions agree eminently and inconceivably with ours—willing and understanding with the intellect, but seeing and hearing without eyes or ears. Comparably, wind and air can wipe out landscapes and mountains without hands or other tools, though men need hands and tools to do it.

If you ascribe necessity to God, and deprive him of will and free choice, one suspects that you are depicting this infinitely perfect being as something monstrous. To achieve

your goal you'll need fresh arguments, because in my judgment the arguments you have proposed have no certainty. . . . But let us leave that topic and proceed to others.

For a proof that there are spirits in the world, you want a demonstrative proof, of which there are very few in the world. Apart from those of the mathematicians, none have been found that are as certain as we would like. In most cases we have ·only· probable conjectures, and are satisfied with that. If the arguments by which the things are proven were demonstrations, then only foolish and obstinate men would speak against them. But, my dear friend, we are not so lucky. In the world we are not so precise; to some extent we proceed by conjecture; and in our reasoning we accept the probable, for lack of demonstrations. This is evident in all the sciences, both divine and human, which are full of questions and disputes, this being why we find so many differences of opinion.

It's why there used to be (as you know) philosophers called 'sceptics, who doubted everything. These sceptics disputed for and against, arriving (lack of true proofs) at what is probable, each believing what seemed to him most probable.

- The moon is positioned directly under the sun. Therefore, the sun will be obscured in a certain part of the earth.
- If the sun is not obscured while it is day, then the moon is not positioned directly under it.

This is a demonstrative proof from the cause to the effect, and from the effect to the cause. There are some proofs of that kind, but very few that can't be contradicted by anyone who understands them.

As for beauty, some things are better than others in their composition, i.e. in the proportions among their parts; and God has put the human intellect and judgment into

harmonious agreement with what is well-proportioned, and not with what has no proportion—so that (·for example·) our hearing can distinguish harmonious sounds from unharmonious ones, because the one causes pleasure and the other causes irritation.

The perfection of a thing is also beautiful—it has the beauty of *lacking nothing*. There are many examples of this, but I shan't bore you with them. Let us only look at the world, which is called 'the whole' or 'the universe'. If that's what it is (and it definitely *is*) then the world is not lacking in or deprived of incorporeal things.

What you say about centaurs, hydras, harpies etc. is not relevant here, for we are speaking only about the most universal genera of things, and about their highest degrees, for example, about eternal and temporal, cause and effect, finite and infinite, souled and unsouled, substance and accident, corporeal and spiritual, etc., which subdivide into countless and varied species.

I say that spirits are like God, because he is also a spirit. You require as vivid and clear an idea of spirits as of a triangle. This is impossible. What idea do you have of *God*? Is it as clear for your intellect as your idea of a triangle? I know for sure that you don't have such an idea of God; and I repeat that we are not so fortunate that we grasp things through demonstrative proofs, and that for the most part probability has the upper hand in this world. . . .

I say that the sun is the centre of the world and that the fixed stars are further from the earth than Saturn, and Saturn further than Jupiter, and Jupiter further than Mars, etc., so that in the endless air some things are further from us and others nearer. We call these 'higher' or 'lower', respectively.

The credit of philosophers is not undermined by those who maintain that there are spirits but those who deny this. For all the philosophers, ancient and modern, are convinced there are spirits. Plutarch is a witness of this in his treatises *The Opinions of the Philosophers* and *Socrates's Spirit*. Similarly, also all the stoics, Pythagoreans, Platonists, Aristotelians, Empedocles, Maximus Tyrius, Apuleius, and others. No philosopher today denies them. Go ahead then: reject all the wise and intelligent eye- and ear-witnesses, all the philosophers and historians, who relate these stories. Say that they, along with the common herd, are all fools and idiots. Your answers don't persuade anyone—they're absurd, and generally don't touch the heart of our dispute. And you don't produce a single proof that establishes your opinion. What Caesar mocked was not spirits, but omens and foretellings, as did Cicero and Cato. Still, if he hadn't mocked the soothsayer Spurina on the day he died, his enemies wouldn't have killed him with so many stab-wounds. But enough of that for now.

56. to Boxel, x/xi.1674:

...It would be evident just from this dispute we are now having—even if reason didn't show it—how difficult it is for two people who follow different principles to be able to understand one another, and to agree, on a topic that depends on many other things.

Have you seen or read *any* philosophers who think that the world was made 'by chance' in your sense of the phrase, i.e. that in creating the world God had a purpose and yet went completely outside it? I don't know that any man ever had such a thought.

Any more than I know by what reasons you plan to persuade me that 'by chance' and 'necessarily' are not

contraries. As soon as I realise that the three angles of a triangle *necessarily* equal two right angles, I also deny that this happens *by chance*. As soon as I find that heat is necessarily an effect of fire, I also deny that this happens by chance.

To say that the necessary is contrary to the free seems no less absurd and contrary to reason. No-one can deny that God knows himself and all other things freely; yet everyone agrees that God can't fail to know himself, can't stop knowing himself. You seem not to be distinguishing necessity from coercion or force. A man *necessarily* wants to live, to love, etc., but this isn't something he is *coerced* into. The same holds even more for God's wanting to be, to know and to act.

And if you think about this:

Indifference is only ignorance or doubt; a will that is always constant and determined in everything is a virtue and a necessary property of the intellect,

you'll see that what I have said agrees completely with the truth. To say that God *could have failed to will* something that in fact he did will, and *could not have failed to understand* something, is to attribute to God two different 'freedoms', one necessary (understanding), the other indifferent (will). This distinguishes God's will from his essence and from his intellect; so people who go this route fall from one absurdity to another.

The **attention** I required in my preceding letter seemed unnecessary to you. That's why you did not fix your thoughts on the main point, and why you neglected what was most relevant.

Next, you say that you don't know what kind of God I have if I deny that the acts of seeing, hearing, attending, willing, etc. are in God *eminently*. This makes me suspect that you think there's no greater perfection than that which can be explained by those attributes. I'm not surprised at

this. If a triangle could speak, it would say in the same way that God is triangular eminently, and a circle would say that the divine nature is circular eminently. In the same way each thing would ascribe its own attributes to God, and make itself like God. Everything else would strike it as deformed.

I don't have time or space to answer your questions to me about the divine nature. Anyway, raising difficulties is not the same thing as giving arguments. It's true that we proceed on the basis of conjectures •in the world, but not that we do so •in our contemplations. In daily life we're compelled to follow what is most probable, but in contemplations we must follow the truth. A man would die of hunger and thirst if he weren't willing to eat or drink until he had a perfect proof that the food and drink would be good for him. But in contemplation this is irrelevant. On the contrary, we must beware of assuming as true something that is only probable. Once we have accepted something that is false, countless other false things follow from it,

Next, from the fact that the divine and human sciences are full of disputes and controversies we can't conclude that everything in them is uncertain. Many people are such lovers of contradiction that they have even mocked geometrical demonstrations. Sextus Empiricus and the other sceptics whom you mention deny that the whole is greater than its part, and they judge similarly concerning the other axioms.

...I agree that when we don't have a demonstration we must be content with probabilities; but a probable proof, though we can have doubts about it, must be something that we can't contradict. What can be contradicted is not probable but improbable. For example, if I say that Peter is alive, because I saw him in good health yesterday, that is indeed probable as long as no-one can contradict me. But if someone else says that yesterday he saw Peter faint, and that he thinks Peter then died, this makes what I said seem

false. Your conjecture concerning ghosts and spirits seems false, not probable; I have shown this so clearly that I find nothing in your reply worthy of consideration.

You ask whether I have as clear an •idea of God as I do of a triangle, and I answer Yes. But if you should ask whether I have as clear an •image of God as I do of a triangle, I would answer No. We can't imagine God, but we can indeed understand him. I'm not saying that I know God completely: I don't know all or even most of his attributes, but that doesn't block me from knowing some of them. Early in my learning of Euclid's *Elements* I understood that the three angles of a triangle equal two right angles. I clearly perceived this property of the triangle, though I was ignorant of many of its other properties.

As for ghosts or spirits, I haven't yet heard any intelligible property of theirs, but only imaginations that no-one can get his mind around. When you say that ghosts or spirits here below—I follow your style, although I don't know that matter here 'below' is worth less than matter 'above'!—consist of a very thin, finely divided substance, you seem to be talking about spiders' webs, air, or vapours. To call them invisible is to say what they are *not*, not what they *are*, unless perhaps you want to say that they can switch their invisibility on or off as they please, and that the imagination will find no difficulty in this or other impossibilities,

The authority of Plato, Aristotle, and Socrates is not worth much to me. I would have been amazed if you had mentioned Epicurus, Democritus, Lucretius, or any of the defenders of atoms. But it's not surprising that those who invented occult qualities, intentional species, substantial forms, and a thousand other trifles also contrived ghosts and spirits, and believed old wives' tales so as to lessen the authority of Democritus, whose good reputation they so envied that they had all his books burned. . . . If you are willing to put

your faith in *them*, what reason do you have for denying the miracles of our blessed Virgin and of all the saints, which so many famous philosophers, theologians, and historians have described that I can produce a hundred of them to one who testifies to ghosts.

I have gone on longer than I meant to. I don't want to trouble you any more with these things. I know I won't convince you, because you follow principles completely different from mine.

·END OF THE BOXEL EXCHANGE· [from page 75]

57. from von Tschirnhaus, 8.x.1674:

[The opening paragraph of this is obscure, and we can do without it. The original clearly has one defect, and there may be more. Von Tschirnhaus wrote to Spinoza's friend Schuller a letter of which a part was meant for Spinoza, and in which Spinoza is addressed as 'you'. That part is what we have here. Spinoza replies to it in letter 58, to Schuller.]

Take any case where one man affirms something and another denies it, and they speak in such a way that each is aware of this ·apparent disagreement·. Going by their •words, they seem to be contrary to one another; but if we attend to their •concepts, each is speaking the truth according to his concept. (Well, not in every case; but whenever each speaker is saying something that he believes to be true.) I mention this as something immensely useful in ordinary life; once it has been observed, countless disagreements can be prevented, along with the quarrels stemming from them. This rule is so universal that it holds for all men, including madmen and dreamers. For whatever these people say they are seeing or have seen, it is quite certain that they are telling the truth about what *they* have seen, though we haven't seen it.

This is also observed most clearly in the case we are discussing, concerning free will. It seems that those who argue for it and those who argue against it are all speaking the truth according to their concepts of freedom. Descartes calls 'free' what is not *compelled* by any cause, whereas you call 'free' what is not *determined to something* by any cause. I agree with you that in all things we are determined to something by a definite cause, and thus that we have no free will. But I also think, with Descartes, that in some things. . . .we're in no way compelled, and so have free will. . . .

The state of the question is three-fold. **(1)** Do we have, absolutely, any power over things that are outside us? No. For example, my now writing this letter is not absolutely in my power, because I certainly would have written earlier if I hadn't been prevented by being away from home or by having friends visiting me. **(2)** When the will determines our body to move in a certain way, do we have power absolutely over those motions? We do if we are living in a healthy body; if I am healthy, I can always apply myself to writing or not. **(3)** When I can enjoy the exercise of my reason, can I use it most freely, i.e. absolutely? Yes. For who can deny, without contradicting his own consciousness, that

the next bit, literally translated: in my thoughts I can think that I will to write, or not to write?

what was probably meant: it is absolutely up to me whether to perform the mental act of willing to write or the mental act of willing not to write?

And also as far as the action is concerned, because the external causes permit this (which concerns **(2)**), that I indeed have the capacity both to write and not to write? [The above re-interpretation will be dropped when Spinoza replies in letter 58. He probably thought that von Tschirnhaus meant something like that, but his comments are tied to what he actually wrote.]

I affirm with you that there are causes determining me to this; I write now because you first wrote to me and asked me to write back at the first opportunity, and because there's an opportunity now that I don't want to miss. And I affirm with Descartes, my consciousness serving as a witness, that such things don't compel me, and that I really could despite those reasons refrain from doing this. This seems impossible to deny.

Also, if we were compelled by external things, who could acquire the habit of virtue? If this were affirmed, indeed, all wickedness would be excusable. But in fact it often happens that if we are determined to something by external things, we resist this with a firm and constant heart.

Thus, . . . you and Descartes are both speaking the truth according to your own conception. But the absolute truth agrees only with his opinion. For your conception is based on the supposition that

- the essence of freedom consists in *not being determined by anything*.

If this is affirmed, both positions, yours and Descartes's, will be true. But the essence of a thing is something without which it can't even be *conceived*; and freedom can certainly be conceived clearly, even in someone who is determined by external causes or inducements to act in some way. . . .; but not in someone who is being compelled. [He gives references to passages in Descartes's Correspondence.] But let this be enough. I ask you to respond to these difficulties.

58. to Schuller, x.1674:

Our friend Jan Rieuwertz sent me the letter you were kind enough to write me, together with your friend's judgment [letter 57] concerning my opinion and Descartes's on free will, which was most welcome to me. Just now I am greatly

distracted by other matters and am not in the best of health; but your singular kindness, and (what I think is most important) your zeal for the truth compel me to satisfy your desire as well as the limits of my ability allow.

. . . Your friend says that if one man affirms something concerning some matter and another denies it, then etc.; this is true if he means that the two men are using the same words but thinking about different things. I have sent some examples of this to Jan Rieuwertz and am writing to him now to ask him to communicate them to you.

So I pass to that definition of *freedom* which he says is mine, though I don't know where he got it from. I say that a thing is

- free if it exists and acts solely from the necessity of its own nature, and
- compelled if it is determined by *something else* to exist and produce effects in a certain and determinate way.

For example, God exists necessarily, but he exists freely because he exists from the necessity of his own nature alone. He understands himself and everything else freely because it follows solely from the necessity of his nature that he understands all things. You see, then, that I place freedom not in a free decree, but in free necessity.

But let us descend to created things, which are all determined by external causes to exist and to produce their effects in a definite and determinate way. To understand this clearly, consider a simple example:

A stone receives, from an external cause that starts it moving, a certain quantity of motion; and by this it then necessarily continues to move, although the impulse of the external cause has ceased.

Therefore, the stone's continuing to move is compelled, not because it is necessary but because it must be defined [here = 'made definite', 'given its properties'] by the impulse of the external

cause. What I say here about the stone applies to any individual thing whatever, however complex in structure and operations; *every* individual thing is necessarily determined by some external cause to exist and produce effects in a certain and determinate way.

Now suppose that the stone is thinking while it moves, and that it knows that it's doing its best to continue to move. Being conscious only of its effort and not being at all indifferent, the stone will believe that it is very free and perseveres in motion purely because it wills to. This is the famous human freedom everyone brags of having, which consists only in this: that men are conscious of their appetite and ignorant of the causes by which they are determined. So the infant believes that he freely wants the milk; the angry boy that he wants vengeance; and the timid, flight. The drunk believes that it's from a free decision of his mind that he says things that next morning he soberly wishes he hadn't said. Similarly, the madman, the chatterbox, and a many people of this kind believe that they act from a free decision of the mind, and not that they are carried away by impulse.

Because this prejudice is innate in all men, they aren't easily freed of it. Experience teaches abundantly that •nothing is less in man's power than to restrain his appetites, and that •when men are torn by contrary affects [see Glossary] they often 'see the better and follow the worse' [Ovid]; yet they still believe themselves to be free because when they want something only slightly their appetite for it can easily be restrained by the memory of something else that comes to mind more easily, and they mistake this restraint as an exercise of their free will.

I think I have now explained sufficiently what my opinion is concerning free and compelled necessity, and concerning that fictitious human freedom. From this it is easy to reply to

your friend's objections. When Descartes says that being free is not being compelled by any external cause, if he means by a man who is 'compelled' one who acts unwillingly, then I grant that in certain things we are not at all compelled, and in this respect we have free will. But if by 'compelled' he means acting necessarily though not unwillingly, then (as I have explained above) I deny that we are free in anything.

But your friend says that we are most free in the exercise of our reason, i.e. that we can use it absolutely. He pushed this opinion with great—not to say too much—confidence. 'Who can deny,' he writes, 'without contradicting his own consciousness, that in my thoughts I can think that I will to write, or not to write?' I would like to know what sort of consciousness he is speaking about, beyond what I have expounded in the example of the stone. For my part, unless I contradict my consciousness—i.e. contradict reason and experience—and unless I encourage prejudices and ignorance, I deny that I can think, by any absolute power of thinking, that I do will to write and that I do not will to write.

But I appeal to *his* consciousness; for doubtless he has experienced that in dreams he doesn't have the power of thinking that he wills to write and does not will to write. Nor when he dreams that he wills to write, does he have the power of not dreaming that he wills to write. Nor do I believe that he has learned anything *less* from experience than that the mind is always equally capable of thinking of the same object; what experience *does* teach us is that the mind's ability to contemplate a given object is proportional to the body's ability to have an image of that object stirred up in it.

And when he adds that the causes of his applying his mind to writing have indeed prompted him to write but haven't *compelled* him to, what that comes down to (if you think about fairly) is that his mind was then so constituted

that he was easily led to that by causes that couldn't have had that effect at some other another time (e.g. when he was in an emotional turmoil). That means simply that causes that couldn't have compelled him at another time have compelled him now—not to write unwillingly, but to necessarily want to write.

He says next that if we were compelled by external causes, no-one could acquire the habit of virtue. That is:

We can't have a strong and constant disposition •from a fatal [see Glossary] necessity, but only from •a free decision of the mind

—I wonder who told him *that!* And as for what he adds finally: that if this is posited then all wickedness would be

excusable—what of it? Evil men are no less to be feared, and no less harmful, when they are necessarily evil. But concerning these matters, please see chapter 8 of Part 2 of my *Metaphysical Thoughts*.

Finally, I should like your friend, who raises these objections to me, to tell me how he conceives •the human virtue that arises from the free decree of the mind to be consistent with •God's preordination. If he joins Descartes [*Principles of Philosophy* I:39–41] in admitting that he doesn't know how to reconcile these things, then he is trying to hurl at me the spear by which he himself is already pierced through. But in vain. If you examine my position attentively you'll see that everything in it is consistent.

Notes on the other correspondents

Pieter Balling (c. 1664–1669): A Mennonite and an enemy of dogmatism. He was the agent in Amsterdam of various Spanish merchants, knew Spanish well, and may have come to know Spinoza through that. He was the translator into Dutch of Spinoza's *Descartes' 'Principles'* and *Metaphysical Thoughts*, and perhaps of other works as well.

Willem van Blijenbergh (1632–1696): A grain broker by profession, but also an ardent would-be theologian and metaphysician. Spinoza's initial warm welcome to him would have been more cautious if he had known that van Blijenbergh had already published a work entitled

Theology and Religion defended against the views of Atheists, wherein it is shown by natural and clear arguments that God has implanted and revealed a Religion, that God wants to be worshipped in accordance with it. . . etc.

In 1674 he wrote another such book, including 'a refutation of Spinoza's *Treatise on Theology and Politics*—'that blasphemous book'. Spinoza's final letter to him (27) is notably gentle and temperate.

Johannes Bouwmeester (1630–1680): A close friend of Meyer and of Spinoza. Trained in medicine and philosophy at the University of Leiden, he was a fellow member with Meyer of the society *Nil volentibus arduum* [Latin: Nothing is difficult for the willing] and codirector of the Amsterdam theater in 1677.

Hugo Boxel: High-level bureaucrat and then governor of his native city Gorkhum.

Robert Boyle (1627–1691): Son of an Earl, and the leading British scientist of the period between Bacon and Newton. He

belonged to a group of Baconians that was later incorporated as the Royal Society. His reputation as a scientist is most securely based on work that led him to the law relating the pressure and volume of gases. He held that science was not only compatible with Christianity but encouraged an appreciation of God's works, and he wrote extensively against atheism.

Albert Burgh: Son of an influential member of the governing classes. When he converted to Roman Catholicism, his parents asked their friend Spinoza to intervene, which he did, though unsuccessfully.

J. Ludovicus Fabritius (1632–1697): Professor of philosophy and theology at the University of Heidelberg. The Elector Palatine, on whose behalf he wrote letter 47, was Karl Ludwig, brother of Queen Christina of Sweden, Descartes's patroness.

Johan George Graevius (1632–?): Professor of rhetoric in the university of Utrecht.

Johannes Hudde 1628–1704: A student at the University of Leyden in the 1650s; joined a research group that translated Descartes's *Geometry* into Latin and published it with three appendices, one by Hudde. Did significant work in mathematics, optics, and probability theory. Mayor of Amsterdam (1672–1702).

Jarig Jelles (?–1683): A spice merchant in Amsterdam, he entrusted his business to a manager and devoted himself to the pursuit of knowledge. He was one of those who persuaded Spinoza to publish his *Descartes's 'Principles'*, and he paid the cost of publication.

Gottfried Leibniz (1646–1716): The most distinguished European philosopher of the generation after Spinoza's.

Lodewijk Meyer (1629–1681): Studied philosophy and medicine at the University of Leiden, where he became an ardent Cartesian. After receiving doctorates in both subjects he practised medicine in Amsterdam and figured in the literary world—wrote poems and plays, assisted with an important dictionary, directed the Amsterdam theater.

Henry Oldenburg (c. 1618–1677): Born in Bremen, where he studied theology. Most of his adult life was spent in England, where he was occupied partly in diplomatic work, partly in teaching (one of his pupils being a nephew of Boyle), but mainly with the secretaryship of the Royal Society, a position he held from 1662 until his death.

Jacob Ostens (1625–1678): A Collegiant [see Glossary] and surgeon.

G. H. Schuller (1631–79): A medical practitioner in Amsterdam. Spinoza consulted him medically sometimes, including during his final illness; and Schuller was with Spinoza when

he died.

Nicholas Steno (1638–1687): Physician and research biologist; converted to Roman Catholicism in 1667.

Ehrenfried Walther von Tschirnhaus (1631–1708): A German Count who studied in Holland and served as a volunteer in the Dutch army. He had many scientific activities and interests, and is also credited with being the first European to find out how to make porcelain.

Lambert de Velthuysen (1622–1685): Studied philosophy, theology and medicine at the University of Utrecht, and practised medicine there. His liberal views in religion brought him into conflict with the dominant church, but he couldn't see his way to agreeing with Spinoza.

Simon de Vries (c. 1633–1667): An Amsterdam merchant and Collegiant [see Glossary]. When his death was approaching, de Vries wanted to make Spinoza his sole heir; Spinoza declined, because the money ought to go to de Vries's brother, though he did eventually accept a small annuity—half the amount offered—from the brother.