The Cambridge Companion to SPINOZA

EDITED BY
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1 Spinoza's life and works

Benedict (Baruch) Spinoza's life is usually summarized in a few lines, as follows. He was born in 1632 in Amsterdam as a son of Jewish Marrano immigrants from Portugal. After having been educated as a Jew, he was excommunicated in 1656. While earning his livelihood, first by commerce and later by grinding lenses, he learned Latin in the school of Franciscus van den Enden and conversed with a circle of Amsterdam Collegiants, who were dedicated to Cartesianism. He lived in Rijnsburg near Leiden (1660–3), in Voorburg near The Hague (1663–70), and in The Hague (1670 onward). He published in 1663 under his own name *Descartes's "Principles of Philosophy"* (*Renati Des Cartes Principiorum Philosophiae, Pars I et II, More Geometrico demonstratae*), and anonymously in 1670 the *Theological-Political Treatise* (*Tractatus Theologico-Politicus*). After his death (February 21, 1677) his *Opera Posthuma* – containing in Latin his main work the *Ethics, Demonstrated in Geometrical Order* (*Ethica, Ordine Geometrico demonstrata*), the *Correspondence* (*Epistulae*), the unfinished *Political Treatise* (*Tractatus Politicus*), the unfinished *Treatise on the Emendation of the Intellect* (*Tractatus de Intellectus Emendatione*), and a *Compendium of Hebrew Grammar* (*Compendium Grammatices Linguae Hebraeae*) – was published by his friends. They also produced a Dutch translation of the *Opera Posthuma* (without the *Hebrew Grammar*), called *De Nagelate Schriften*, in the same year. An early forerunner of the *Ethics*, in Dutch and entitled *Short Treatise on God, Man, and His Well-Being* (*Korte Verhandeling van God, de Mensch en des zelfs Welstand*), was discovered and published in the nineteenth century. Spinoza was a seventeenth-century rationalist philosopher much decried on account of his atheism.

Even in this rough survey some features are false, inaccurate, or

slightly misleading. For the purpose of a reliable biography, a critical discussion of the available biographical documents is unavoidable. This is the more necessary because the old biographies sometimes show considerable differences in their presentation. I warn the reader that this chapter is a reconstruction of Spinoza's life story on the basis of a new interpretation of the sources and the presentation of some new sources. I will, however, offer the basic material so that the reader may judge whether I am right or not.

Baruch's father, Michael Spinoza, born in 1587 in Vidiger (Portugal), was a respected and influential member of the Jewish community in Amsterdam. He was regularly elected a member of the *Parnassim* (*Senhores Quinze*), a board which discussed common affairs. He earned his living as a merchant; he must have traded in dried citrus fruit. Business was successful in the period before 1652; his bank balances were high. He lived in the Amsterdam Jewish quarter Vlooienburg, the place where today the Music House and Townhall are erected.[1] Michael married three times within his own family: first to Rachel de Spinoza, who died in 1627; then to Hanna Debora Despinosa, who died in 1638; and finally to Ester d'Espinosa, who died in 1653. Two children, Isaac and Rebecca, were born to Michael and Rachel; Baruch, Mirjam, and Gabriel were born to Michael and Debora.

Spinoza was born on November 24, 1632 and given the Jewish name "Baruch," although his family called him "Bento." "Baruch," "Bento," and the later latinization "Benedict" or "Benedictus" have the same meaning, namely "blessed person." His mother tongue was Portuguese, but as a young child Bento would very quickly have picked up some Dutch words when playing on the street with Dutch children. Spanish was the cultural language among the Sephardim Marranos, whose forefathers had been expelled from Spain to Portugal. But the education, of course, was primarily an introduction to Hebrew, the language of the Holy Scripture, and the study of the Law and the Talmud. His parents sent him to the excellent Talmud Torah school, which was famous because of its well-planned educational system. A certain rabbi Sabattai Scheftel Hurwitz, who visited Amsterdam in 1649, wrote: "I also came in their school, which was lodged in a large building. I saw that the small children learned the Pentateuch from the first to the last words, after this the other twenty-four Books of the Bible

and then the whole Mischna." Among Spinoza's schoolmasters were the famous Saul Levi Morteira[2] and Menasseh ben Israel.[3] He must have attended the school until he was a young man of about fourteen years old.[4]

Historians suggest today that he did not finish the higher education which prepares for the rabbinate, but that he became involved in commercial activities, first together with his father and then, from 1654 onward, when his father had died, together with his brother Gabriel in the firm of "Bento y Gabriel Despinoza." In April and May 1655 the young merchant had a bitter experience with a debtor named Anthonij Alveres who failed to repay a large amount of money. Alveres even assaulted him, as is attested in an official document:

> Today, the 7th of May, 1655, appeared before me, Adriaen Lock, notary &c. in the presence of the witnesses mentioned hereafter, Hendrick Fransen, about 35 years old and Jan Lodwijcxsen, about 32 years old, both in the service of the honourable Cornelis de Vlamingh from Outshooren, chief-sheriff of this city, and in true words and offering to take the oath, they solemnly testified, declared and attested at the request of Bento Dispinose, *merchant here*, that it is true that about a week and a half ago, without remembering the exact day, they arrested *at the request of the requisitionist*, the person of Anthonij Alveres for debt and that they took him to the inn De Vier Hollanders in the Nes here, to obtain payment of a certain bill of exchange of five hundred guilders that the requisitionist owned, chargeable to him and that said Anthonij Alveres then asked the requisitionist to come to the inn to reach an agreement with him; that when the requisitionist arrived there, the said Anthonij Alveres hit the requisitionist on the head with his fist without there having been spoken a word in return and without the requisitionist doing anything. (Vaz Diaz and Van der Tak 1982: 160; emphasis added)

In March 1656 we see Spinoza – through the mediation of the Orphan-master Lous Crayer – abstain from all claims on his father's inheritance "since he is afraid that after the strictest application of the law the judicial allocation of the claim could be an encumbrance to him, which might be used against him by the creditors." Also in 1656 Spinoza stopped paying his *finta* and his *imposta*, the usual contribution and tax for the benefit of the community that were calculated according to the wealth and the sum of the merchandise that had been traded. We do not know whether the reason was that

business had declined or that he had already drifted away from the orthodox Jewish way of life and Jewish customs. The latter interpretation seems the most probable, because a few months later (July 27, 1656) he was formally excommunicated on account of his heresies and behavior. The text of the act of excommunication is preserved, and reads in translation:

> The Senhores of the Mahamad make it known that they have *long* since been cognizant of the *wrong opinions and behavior of Baruch d'Espinoza*, and tried various means and promises to dissuade him from his evil ways. But as they effected no improvement, obtaining on the contrary more information every day of the *horrible heresies* which he *practiced and taught*, and of the *monstrous actions* which he performed, and as they had many trustworthy witnesses who in the presence of the same Espinoza reported and testified against him and convicted him; and after all this had been investigated in the presence of the rabbis, they decided with the consent of these that the same Espinoza should be excommunicated and separated from the people of Israel, as they now excommunicate him with the following ban. . . . We order that nobody should communicate with him orally or in writing, or show him any favor, or stay with him under the same roof, or come within four ells of him, or read anything composed or written by him. (emphasis added)[5]

The document makes a clear distinction between Spinoza's deviant behavior and his unorthodox opinions. It also supposes, however, that they had already been practiced and taught during a long period. Endeavors on the part of Jewish authorities to bring him back to the right path had remained without any result. One must realize, moreover, that the act of excommunication, as quoted above, speaks about Spinoza in the third person. Spinoza himself was already gone beforehand[6] and was already "converted" to another worldview and another lifestyle.

> After experience had taught me that all the things which regularly occur in ordinary life are empty and futile, and I saw that all the things which were the cause or object of my fear had nothing of good or bad in themselves, except insofar as my mind was moved by them, I resolved at last to try to find out whether there was anything which would be the true good.[7]

I surmise that Spinoza's conversion took place at least half a year before he was excommunicated. The excommunication was not at all a tragic experience in his life. Other things were more so, including

the violence of human emotional reactions and the life-threatening danger of human greed, ambition, and bigotry.

Spinoza's intellectual power, which emerged shortly after 1656 in his *Treatise on the Emendation of the Intellect*, must have had a long incubation. A philosophical genius cannot come from nowhere; ideas have their causes, like other things, and need time for their development. It is dangerous to propose a history of Spinoza's mental evolution. But one may at least speculate. In 1648 Spinoza was a young man of sixteen. He had refused to continue his studies in the higher courses in Jewish theology given by his masters, although his father, a faithful and perhaps also conservative member of the community, recommended them forcefully. He read the Jewish theological authors, first of all Maimonides, but they could not satisfy his inquisitive mind. His critique of the Jewish system, the many prescriptions and their vindication, deepened. He could only free himself from their pressure by a commercial participation in public life in his father's business; this seemed to him a promising way out. Along this line he came into contact with other merchants, many of them of Mennonite origin, who had free minds and were much interested in the new philosophy of Descartes. Pieter Balling[8] and Jarig Jelles,[9] both of them merchants and later friends, as we know from the correspondence, were among them; he could have met them on the Bourse. Descartes was praised for his new physics and geometry. Although he left Holland for Sweden in 1649, where he died a year later, Descartes's writings were published in Holland and raised much discussion. The religious freethinkers held special meetings – "colleges" – in which everyone was welcome. Perhaps Spinoza joined these *Collegianten*. He soon realized that he could not avoid learning Latin. There was a marvelous opportunity to become acquainted with the language of the sciences and with the new science itself in the newly (since 1652) established Latin school of the medical doctor Franciscus van den Enden. This Van den Enden participated in scientific disputations, attended the meetings of the *Collegianten*, and instructed the youth of the well-to-do citizens, who did not want to send their sons and daughters to the official, but reformed, Latin school of the town. Many biographical documents confirm that Spinoza learned Latin and atheism from Van den Enden, without saying whether this was before or after the excommunication.[10]

In my view, we cannot doubt that Spinoza's process of seculariza-

came to The Hague some years after Spinoza's death, lived in a house where Spinoza had dwelled, did some research on his famous forerunner, and then wrote the *Korte, dog waaragtige Levens-Beschrijving van Benedictus de Spinosa, uit Autentique Stukken en mondeling getuigenis van nog levende Personen, opgestelt* (*Short but true Biography of Benedictus de Spinosa, drawn up from authentic pieces and oral testimonies of still living people*), is also very clear about this point:

> Spinoza now understanding the Latin Language . . . and finding himself more capable for research into physical things (*natuurkundige zaaken*), dropped theology and dedicated himself totally to philosophy (*wysgeerte*). For some time he looked for a good Master and for writings which served his intentions, until he finally hit upon Renatus Descartes. He often pretended to have received the greatest light in his natural science (*in zijn natuurkunde*) from Descartes, and that he had learned through him, to accept nothing that could not be proved with sound and clear reasons. . . . As a consequence (*Dienvolgens*) he started to avoid more and more the intercourse with his Jewish Masters and to appear only seldom in the Synagogue, whereupon they started to hate him. (Colerus 1705: 6)

There is no misunderstanding possible concerning the reference of "*sciences humaines*" or "*natuurkunde*." The testimony of a third biographer, the critical Pierre Bayle in his influential article, "Spinoza," in *Dictionnaire historique et critique*, must be interpreted in the same vein:

> He studied Latin language under a medical doctor, who taught in Amsterdam, and he applied himself very early to the study of theology to which he spent several years; after this he dedicated himself totally to the study of philosophy. Since he had the attitude of a geometrician (*l'esprit géomètre*) and he wanted to be paid with reasons for all things, he soon understood that the doctrine of the rabbis did not fit his taste. . . . He withdrew little by little from the Synagogue. (Bayle 1697)

According to the evidence of these documents, the departure from the Synagogue was more the end point of an introduction into natural science than its starting point, as is usually supposed. The new physics of Descartes must have played an important role in Spinoza's process of enlightenment. This is confirmed by Lucas.[12] I will come back to this influence in a moment.

The period 1656–61 is rather invisible for the eyes of the Spinoza

historian. We may suppose that Spinoza was for one or two years still in the Latin school of Van den Enden; independent evidence for this hypothesis is the fact that Spinoza's latinity shows much familiarity with the Latin of Terence. We know from other sources that this Latin comedy writer had an important place in Van den Enden's educational method. Under his leadership, the pupils played the *Andria* and the *Eunuchus* in the Town Theater of Amsterdam several times during the first months of 1657 and 1658. Many of Spinoza's crypto-citations of Terence may be traced back to certain roles of the comedies which, therefore, could have been played by Spinoza himself, one of the older pupils.[13] A curious thing is that quotations from Terence seem to be completely absent from the *Treatise on the Emendation of the Intellect*; this absence could be interpreted as an indication for a very early date of this text, namely before Spinoza's participation on the stage.[14] The content and Latin of this work are much nearer to the tragedies and letters of Seneca and the *Metamorphoses* of Ovid.[15] An early origin of the *Treatise on the Emendation of the Intellect* not only fits Mignini's theory about a later origin of the *Short Treatise* (to be discussed later), but is also confirmed by Jarig Jelles in his *Voorreeden* (Preface) to the *Nagelate Schriften*, in which he provides us with a very reliable survey of Spinoza's life, works, and philosophy. He writes, "The *Treatise on the Emendation of the Intellect* was one of the first works of the Author as is testified by its style and concepts themselves."[16] Jelles must have known about Spinoza's *"Apologia."* It is tempting to substantiate his plural, "one of the author's first works," by connecting the esoteric *Treatise on the Emendation of the Intellect* with the time of the exoteric *"Apologia"* as an unfinished endeavor to render an account of his conversion to philosophy. The first pages of the *Treatise on the Emendation of the Intellect* can only be explained as being very close to Spinoza's personal experiences and the beginning of his new "institution," his new point of view: the unity of the mind with the whole of nature. They are, as it were, notations drawn from his private journal, from the time of his transition to a new "system."[17]

Apart from the orthodox majority there were also Jewish freethinkers in the Amsterdam Jewish community. The tragedy of Uriel da Costa, who, after a life of humiliation, defamation and repeated excommunication, finally committed suicide, must have made a deep

impression in the family of Spinoza. Bento was eight years old when the news came that Uriel da Costa had shot himself. His rejection of the Law of Moses had brought him into deep misery and drawn upon him the hatred of the rabbis.[18] Another radical type in "Freetown" ("*Vrijstad*"), as Amsterdam was called in underground literature, was a certain Juan de Prado, a Spanish medical doctor, born in 1610 in Alcalà in Spain, who had settled in Amsterdam in 1641. His works show that he was a naturalist who identified God with nature and rejected superstitious dogmatic doctrines. C. Gebhardt was the first to point to a possible relationship between Spinoza and De Prado at the end of the 1650s (Gebhardt 1923), but it is the merit of the historian I. Révah to have discovered interesting documents in the archive of the Inquisition in Madrid, which demonstrate that Spinoza and De Prado were in contact with each other (Révah 1959, 1964). The monk Solano y Robles answers to the questions of the Inquisitors on 8 August 1659, referring to his stay in Amsterdam the year before, that:

> He also got acquaintance with Dr. Juan de Prado, physician, who called himself Juan – he did not know his Jewish name – who had studied in Alcalà and a fellow named De Espinosa, who he thought was a native from one of the Dutch towns, because he had studied in Leiden and was a good philosopher. Those two persons had confessed the Law of Moses, and the Synagoge had expelled and excommunicated them since they had turned atheists. And they themselves had said to the witness, that they had been circumcised and had observed the Law of the Jews, but that they had changed their opinion, because it seemed to them that the Law mentioned was not true and that the souls died with the bodies and that there is no God other than philosophically (*ni havia Dios sino filosofalmente*).

In this hearing, Spinoza was described as "a small man, with a beautiful face, a clear tint, black hair, black eyes. He is twenty-four years old [sic]. He had no job and was Jewish from birth." The next day (August 9, 1659) the captain Miguel Perez de Maltranilla was heard, who confessed that he had often (*muchas veces*) spoken with Dr. Prado and Spinoza in the house of a chevalier of the Canaries. He painted Spinoza's appearance thus: "a young man with a well-formed body, slight, long black hair, a small moustache of the same color, a beautiful face; his age is thirty-three years." Moreover, Spinoza told him that he never had seen Spain but that he wished to see this country.

It is important to find the two heterodox Jews, who had suffered the same fate of excommunication in 1656–7, together in the years 1658–9. The "*Dios de la naturaleza*" was their common ground, the foundation of their enlightenment. It is not impossible that Spinoza and De Prado arrived, with each other's help, at the distinction between the several kinds of knowledge, explicitly presented in the *Treatise on the Emendation of the Intellect* 19–29. There is a letter from De Prado to the *Parnassim* of the Talmud Torah, written in 1658, in which one discovers the distinction:

> When I taught him [i.e. the spy sent by the rabbis] about the norms of certainty, asserting that we know some things by natural light, other things from a syllogistic order, other things from experience, other things finally from belief, I gave him at last this example: "I don't believe from experience that there exists a reward and punishment neither do I, forced by reason, assent to the immortality of the soul" (Albiac 1987: 509)

The documents from the Inquisition Archive show that there were contacts between Spinoza and De Prado in the years 1658–9. I cannot, however, follow Révah's overestimation of De Prado's influence, which brings him to the conclusion "that the historians of Spinoza have exaggerated the precocity of the philosophical development of the young Baruch" (Révah 1959: 37). One may imagine that Spinoza opposed De Prado's rejection of the immortality of the soul on account of his early insight into the mind's eternity, as already expressed in the *Treatise on the Emendation of the Intellect.*

A third testimony about the "dark period" in Spinoza's life is contained in the journal of a Danish traveler in the Low Countries, Olaus Borch (Klever 1989b). The notations in the diary of this learned anatomist bring us to the threshold of the slightly better known period of Spinoza's life from which we have at least some letters and other writings. They also show that Spinoza in his Amsterdam period belonged to a group of radical Cartesians. As I noted earlier, the works of Descartes were much discussed in intellectual circles and in the universities.[19] On May 17, 1661, Borch was told, "that there were certain atheists in Amsterdam, most of them Cartesians, among which an impudent atheist Jew." Some months later, on the 10th of September of the same year, when he was traveling in the neighborhood of Leiden, Borch again had something to report about this Jew: People said,

that here in the village Rijnsburg lived somebody who had become a Christian from a Jew and now was nearly an atheist. He does not care about (*non curat*) the Old Testament. The New Testament, the Koran and the fables of Aesop would have the same weight according to him. But for the rest this man behaves quite sincerely and lives without doing harm to other people; and he occupies himself with the construction of telescopes and microscopes.

In 1661 Spinoza was already well-known for his atheism and the fabrication of optical instruments. This text, only recently discovered, is historically the earliest attestation of Spinoza's work in optics, the scientific technology in which he later cooperated with Huygens and the mathematician Hudde. One should not underestimate the value of Borch's testimony. Borch had no special interest in this field and was more fascinated by anatomical lessons than optical theories or theological disputes. What he writes in his diary are the things he casually picks up in his many contacts with other scientists and with professors of the Leiden University. He is, as it were, the echo of the renown that Spinoza already enjoyed in that period. In the same month he once more writes about Spinoza, saying this time "that he *excelled in the Cartesian philosophy,* what is more that he *superseded Descartes,* namely with his distinct and probable ideas; that all those [Cartesian] ideas were far converted by the Amsterdammer Hudde, who added his 'de forkeren' to the recent edition of Descartes' geometrical works" (emphasis added).

It is not quite clear what he means with his reference to Hudde's activity, but it is nonetheless very intriguing to find the famous Hudde[20] already as a neo-Cartesian in Spinoza's companionship and those two among the radical Cartesians of the early 1660s. A third man in this stream of Cartesianizing philosophers was Franciscus van den Enden, probably the mastermind of the circle. He is the first named participant on another day (April 3, 1662), on which Borch, being in Amsterdam, writes in his journal, that:

> there are here atheists and they are principally Cartesianists, like Van den Enden, Glasemaker etc.; and they also teach other people. They don't preach openly atheism, because they often speak about God, but by God they do understand nothing else than this whole universe, as appears more clearly from a *certain Dutch writing,* which was recently artificially written while the name of the Author was suppressed.[21] (emphasis added)

phasis added). In the same year, 1671, Steno wrote to the famous Malpighi: "I have certain friends in Holland who are altogether lost to (*dati tutti alla*) Cartesian philosophy, in such a way that they make philosophy the judge about all knowledge of grace" (Stenonis 1952: 248).

It cannot be doubted that Spinoza had chosen the career of a scientist, that is, the "investigation of nature" in all its aspects. For some years he had concentrated on the laws of human nature, the results of which were laid down in his *Short Treatise on God, Man, and His Well-Being*. Nature was a continuum for him, of which all things were simply modes or modifications. Man is such a mode of the one, divine, infinite nature, determined by other modes in a never-ending series, but always according to the eternal laws, partly known to us in the so-called common notions. For a scientist, everything is caused by something else in the same attribute. This principle is also valid for human behavior, that is, for the motions of human bodies, which must be considered as effects of other motions, inside or (mainly) outside those bodies. This was the point on which he criticized his master in physics, Descartes, as he said in his first letter (September 1661) to the Secretary of the English Royal Society, Henry Oldenburg: "particular volitions cannot be called free (because they require a cause in order to exist), but must be as their causes have determined them to be" (Ep 2).

The English scientists, foremost Robert Boyle, and Spinoza, with other Dutchmen like Huygens and Hudde, had a common field of interest and research, and entertained considerable communication with each other. Oldenburg had told Spinoza about Boyle's physiological essays and his experiments about the elasticity of air, about fluidity and fixity of matter (Ep 1), and he wrote:

> In our Philosophical College we devote ourselves as energetically as we can to making experiments and observations, and are much occupied with putting together a History of Mechanical Arts. For we regard it as settled that the forms and qualities of things can best be explained on mechanical Principles, that all nature's effects are produced by motion, shape and texture, and their various combinations, and that there is no need for us to seek a refuge for our ignorance in inexplicable forms and occult qualities. (Ep 3)

Spinoza must have been fascinated by this news because he fully subscribed to this research program himself. In his Letter 6 he com-

mented as an expert on the results of Boyle's experiments concerning the constitution of saltpeter (niter), using for his criticism the upshot of the three experiments he had done himself. This proves that he must have been introduced to this type of work in an earlier period. In fact, we know that Van den Enden also, together with a certain Johan Glauber,[27] was devoted to chemical analysis. It is likely that Spinoza also had participated in this work when he was still living in Amsterdam. His critique of Boyle's book was that Boyle was not consistent enough in his endeavor to give only mechanical explanations of natural phenomena:

> In paragraph 25 the Distinguished Gentleman seems to wish to demonstrate that the alkaline parts are carried here and there by the impulse of the saline particles, but that the saline particles *raise themselves into the air by their own impulse*.
>
> In explaining this Phenomenon I have said that the particles of Spirit of Niter acquire a more violent motion because, when they enter wider passages, they must necessarily be surrounded by a very fine matter and *driven upwards* by it, as particles of wood are by fire, but that the alkaline particles receive their motion from the impulse of particles of Spirit of Niter penetrating through the narrower passages. (Ep 6; emphasis added)

Another remark, on a passage in which Boyle supposes that nature has designed birds and fishes for flying and for swimming, could not be shorter and sharper: "He seeks the cause in the purpose." A natural scientist is not allowed to explain by final causes.

The reader should consult Letters 6 and 13 in order to discover how much Spinoza was involved in empirical science – without, however, neglecting the principles of mathematical method.[28] We should realize that this was the type of work to which he was mostly dedicated as a "philosopher." His philosophy was not a kind of "armchair philosophy," far away from the center of natural science. On the contrary, he conceived and practiced a type of philosophy which was continuous with what we call today "natural science." This claim can also be proved in another way.

The Amsterdam friends, who in early 1663 already possessed some of Spinoza's writings and discussed them in their circle,[29] suddenly discovered that Spinoza, as a professional tutor, had explained Cartesian philosophy to a Leiden University student named Casearius. This made them jealous. "Fortunate, indeed, most fortunate is your companion, Casearius, who lives under the same roof with you, and

can talk to you about the most important matters at breakfast, at dinner, and on your walks" (De Vries, in Ep 8). In fact, Casearius received from Spinoza a very professional introduction in Cartesian physics; in their contact hours they concentrated on the second and following books of Descartes's *Principles of Philosophy*.

Here is how Lodewijk Meyer, a learned friend and himself a *doctor medicinae* from Leiden University, introduces the 1663 edition of Spinoza's *Descartes's "Principles of Philosophy."* After having declared "that the best and surest method of seeking and teaching the truth in the sciences is that of the mathematicians, who demonstrate their conclusions from definitions, postulates, and axioms, since a certain and firm knowledge of anything unknown can only be derived from things known certainly beforehand," he says that his time is privileged because it is enlightened by the "brightest star" of the age, René Descartes, whose writings contain a mathematical method, though not yet fully formalized. Because unskilled readers need some help with their study of Descartes's work, Meyer had often wished that someone who possessed "a thorough knowledge of Descartes's writings and philosophy" would be able to bring these people some assistance by rendering in the synthetic order what Descartes had written in the analytic order, thereby demonstrating everything in the manner familiar to the geometricians. He felt himself unequal to so great a task and was, moreover, occupied by other things:

> Therefore I was very pleased to learn from our Author that he had dictated, to a certain pupil of his, whom he was teaching the Cartesian Philosophy, the whole Second Part of the *Principles*, and part of the Third, demonstrated in that geometric manner, along with some of the principal and more difficult questions, which are disputed in Metaphysics and had not yet been resolved by Descartes, and that in response to the entreaties and demands of his friends, he had agreed that, once he corrected and added to them, these writings might be published. So I too commended this project to him, and at the same time gladly offered my help in publishing, if he should require it. Moreover, I advised him – indeed entreated him – to render also the first part of the *Principles* in a like order, and set it before what he had already written, so that by having been arranged in this manner from the beginning, the matter could be better understood and more pleasing. When he saw the soundness of this argument, he did not wish to deny both the requests of a friend and the utility of the reader. And he entrusted to my care the whole business of printing and publishing, since he lives in the country, far from the city, and so could not be present. (DPP Preface)

Having summarized, then, the contents of the work, Meyer continues by asserting that Spinoza not only often deviates from Descartes in the arrangement and explanation of the axioms, demonstrations, and conclusions, but also that Spinoza himself in many cases does not agree with Descartes's propositions, which are faithfully presented by him. "So let no one think that he is teaching here either his own opinions, or only those which he approves of." Spinoza, for example, does not think that the will is distinct from the intellect, much less that it is endowed with freedom. According to him, Descartes is only assuming and does not prove that the human mind is a substance thinking absolutely. Another important point of disagreement between Descartes and his expositor is that Descartes is too quick in stating that this or that surpasses the human understanding concerning things which in the opinion of Spinoza are entirely clear and can be explained satisfactorily. The foundations of Descartes's science, says Meyer, are not the same as those of Spinoza's. Meyer's introduction to *Descartes's "Principles of Philosophy"* is extremely valuable as an authentic document about an early period in Spinoza's career, containing a clear statement of Spinoza's position on Cartesian science.

Meyer was an important scientist and author in his own right. He held Spinoza in high respect, but the converse is also true, as may be concluded from Spinoza's letters to him (Ep 12, 12A, 15). It is not impossible that it was he who pushed Spinoza towards the geometrization of his philosophy. After having written his medical and physical doctoral dissertations in 1662 at Leiden University, he returned to Amsterdam as a *"liberalium artium magister"* and dedicated his powers first to the question of the interpretation of the Scripture, which was an important topic in the theological disputes of those years. The results of this research program were published in his *Philosophias s. scripturae interpres* (Meyer 1666).[30] The text of this work, however, was written a few years before (in 1663–4) as Meyer remarks in his postscript.[31] I will attend to this work in order to clarify the meaning of the word "philosophy" in that period and, also, to use the work as a source which not only refers to Spinoza's early influence but likewise to its effects on Spinoza. Secondary literature constructs an opposition between Meyer and Spinoza,[32] in my opinion without any foundation. Both Spinoza and Meyer maintain that the true sense (*sensus verus*) of scriptural phrases, paragraphs,

sections, or works can only be discovered in a rational, that is, scientific, way. They both reject the idea that the meaning of words and sentences would depend on or should have to be accommodated to a certain philosophical system or to other prejudices of readers and interpreters. When they call "philosophy" or "the understanding" the judge of revelation, they do not intend anything other than scientific treatment, professional reading with the help of philology, history, and so on. One should, as a real expert, show and prove by means of linguistic principles, grammar and lexicography, and practical methods like comparison of words and metaphors, that a certain sense is indeed the meaning of the author, even when it is not at all understandable why he wants to say it. "Philosophy" is equivalent to "knowledge of the liberal arts and sciences" (Meyer 1666: 53), "especially grammar, rhetoric, dialectics, and physics" (Meyer 1666: 122), and knowledge of particular languages – in the case of the Scripture, the oriental languages. On the last page of his work Meyer alludes to people (plural) who, following in Descartes's footsteps, "will bring to light such things of God, the rational soul, and human highest happiness and similar things, belonging to the acquisition of eternal life." The sequence of words in this sentence is, for the insiders, a salute to the title of Spinoza's *Short Treatise on God, Man, and His Well-Being*. Some pages earlier, however, Meyer had referred to an anonymous singular: "the most illustrious and experienced man in those things" (i.e. philology), or to "this same man, by far the most exercised in all sort of similar knowledge and learning, who does not hesitate to declare in clear words that *when somebody would compare all the written books of the New Testament with each other, he would find as many differences in them as words*" (Meyer 1666: 131).[33] Elsewhere, this man is called the "eminent philosopher of our age" (Meyer 1666: 134). Meyer, who must have been very close to Spinoza and was fully trusted by him, pays great honor to his scientific companion with these words. His own scientific career was filled with philological, grammatical, and poetical studies. He composed a famous Dutch dictionary, *Woordenschat*, which ran into various editions; an Italian grammar; a Latin vocabulary; and many plays for the theater. He also cooperated with another friend of Spinoza, Johannes Bouwmeester, in the art academy *"Nil Volentibus Arduum"* (*NVA*), which was the collective author of *Onderwijs in de tooneelpoëzy* (*Science of theater poetry*).[34]

of the scientific discussions between Huygens and Spinoza can also be found in Spinoza's letter of May 1665 to Oldenburg:

> Mr. Huygens also has the book on microscopic observations, but unless I am mistaken, it is in English. He has told me wonderful things about these microscopes and also about certain Telescopes, made in Italy, with which they could observe eclipses of Jupiter caused by the interposition of its satellites, and also a certain shadow on Saturn, which looked as if it were caused by a ring. These things make me astonished at Descartes's haste. He says that the reason why the Planets next to Saturn – for he thought its projections were Planets, perhaps because he never observed them touching Saturn – do not move may be that Saturn does not rotate around its own axis. But this does not agree very well with his principles. (Ep 26)

Spinoza certainly joined Huygens during one of his nightly observations of Jupiter by means of his thirty-foot telescope. Spinoza was quite sure of his own position in optics and was not afraid to criticize Huygens. After having summarized in Letter 30 some points of Huygens's *Dioptrics* for Oldenburg in London, he adds to it the remark: "Until now this seems to me fully impossible." Of another mathematician, the later Amsterdam Burgomaster Johannes Hudde, Spinoza asked advice. Letter 36 from June 1666 shows that Spinoza in one and the same letter explained to him the properties of the infinite divine nature and proposed to him an optical formula which would enable him to construct the best new dishes for grinding lenses. Optical questions were also the subject of some correspondence with Jarig Jelles (Ep 39).[37]

Spinoza not only specialized in optical theory and technology but also tried to make observations himself as well as possible, where it was appropriate by means of instruments. To Ostens he wrote that "the nicest hand looks terrible when seen through a microscope" (Ep 54). And the famous Letter 32, in which the harmony in the infinite world is illustrated by the example of a worm living in the blood and pushing against other particles and viruses, clearly suggests that Spinoza practiced the study of the blood by means of his microscope. In Colerus's biography we find a trace of this pleasure in microscopic observation, where he relates about Spinoza:

> He also often took his magnifying glass, observing through this the smallest mosquitoes and flies, at the same time reasoning about them.
>
> He knew, however, that things cannot be seen as they are in themselves.

The eternal properties and laws of things and processes can only be discovered by deduction from common notions and evident axioms. "The eyes of the mind, by which it sees and observes the things, are the demonstrations."[38]

The practice of science to which Spinoza was fully dedicated[39] raised much criticism against his person on the side of the ministers of the Reformed Church, who, having discovered that he identified God with nature in unpublished manuscripts, and being afraid of his growing influence, accused him of atheism and tried to warn their flocks against his "pernicious" doctrines. In a local dispute in Voorburg concerning the appointment of a new minister – in which Spinoza's landlord Daniel Tydeman was also involved – the pious people of the church council spread the following report:

> That the aforesaid Daniel Tydeman has rented an apartment to an A . . . Spinosa, born from Jewish parents, who is now (as it is said) an atheist or someone who scoffs at all religions and therefore is a harmful instrument in this republic, as so many learned men and preachers, among which Rev. Lantman and who know him, may testify, who has written the request presented to the Burgomasters. (Freudenthal 1899: 117-19)

The preachers did not shrink from instigating theological hatred and so, with an appeal to divine revelation, calling a halt to the threatening natural science. From the pulpit and with many polemical pamphlets, the political authorities were accused of negligence in the campaign against this evil. The pressure of the Orangistic party directed by them drove the liberal states-party, the party of the so-called *regenten* (i.e., the political governors), more and more into the corner. The tensions between the Reformed Church and the government resulted in a grim relationship.

Spinoza was not the only one to experience the negative consequences of a life of reason devoted to the causal explanation of things. His friend Lodewijk Meyer wrote in 1665 in the Postscript of his *Interpres*, "The discomfort and harm, which hang above my head, is the hatred of the theologians, who will despise and reject my sentiments. . . . They usually elevate themselves above all scientists, imagining that the divine enunciations are only confided to them." His prediction was accurate. Six undignified refutations followed immediately upon the publication of his scientific treatment of the Scriptures, in which he had done nothing more than to try to discover the "true sense" (*verus sensus*) of the prophecies with lin-

guistic proofs. The first words written in *Onderwijs* by another friend, Johannes Bouwmeester, read: "Everywhere and in all times are the Arts and Sciences most hated by the ignorant," and he stated that especially the ministers of all religious sects tried to darken the truth for their audience in favor of their own profit.

It seemed to Spinoza that it would become impossible for him to remain in security and at the same time explain to his fellow citizens the principles of nature and their application to human behavior, as he had done according to the method of the geometricians in the first drafts of his *Ethics*, already sent to his friends in Amsterdam. Hence, he decided to interrupt this work, which would likely end in disaster, in order first to pave the way for a truly free communication of thoughts. And had it not always been his intention to do his utmost for the well-being of the state in order to derive for himself the maximum of happiness and safety from it? Personal safety depends on the stability of the state. But a sound state is impossible where freedom of thought, speech, and publication is excluded or restricted by the narrow-mindedness of the bigots. In October 1665 he informed Oldenburg about his new activity:

> I have now started writing a treatise with my insights concerning the Scripture. I am motivated to do so by:
>
> 1. The prejudices of the theologians, because I realize that they are the main obstacles which restrain people from the dedication to science.[40] Therefore I exert myself to reveal them and to ban them from the mind of the more prudent people.
>
> 2. The opinion that the common people cherish concerning me: it does not stop to accuse me of atheism. I feel myself compelled to avert as far as possible also this evil.
>
> 3. The freedom to practice science and to express our thoughts. I wish to defend with all means this freedom, which is suppressed here by the too great authority and brutality of the preachers.

The first objective, the unmasking and dismantling of the prejudices of the theologians, consisting in false interpretations and a political misuse of the Scripture, was fulfilled in the first part of the *Theological-Political Treatise* (i.e., Chapters i–xv). An elucidation of this target is also given in the Preface. Having stated that those who call themselves Christians only see mysterious and incredible things in the Scripture, Spinoza continued:

When I revolved this in my mind, namely that the natural light was not only despised but that it was also damned by many as the source of impiety, that human fictions were considered as divine doctrines and credulity was estimated as belief, that in church and court the highest emotions were stirred by philosophical controversies and as a consequence the most cruel hatred and discord originated by which people easily came to rebellion . . . I made the serious decision, to study the Scriptures again, to examine them with a free mind, to neither affirm nor admit anything as its doctrine, that could not be most clearly demonstrated to be so.

The method to fulfill this project is the same as that indicated and practiced by Meyer. Spinoza explained his principles for the scientific understanding and explanation of a text such as the Scriptures in Chapter vii. They consist mainly in the knowledge of the Hebrew language, in a historical approach to the separate books, in a comparison of various parts of a book, and so on. The method of explaining texts does not differ from the method of explaining natural phenomena: In both cases the phenomena are deduced from general principles.

Spinoza's second purpose, namely his defense of himself, as a scientist, against the charge of atheism, is fulfilled in Chapter vi, where he rejects the possibility of miracles and claims that we have a better knowledge of God in the degree we have more knowledge of nature. "If there would happen something in nature, which would not follow from its laws . . . , that would be against nature and its laws and consequently the belief in it would make us doubt everything and lead us to atheism" (TTP vi.28).

Spinoza realizes the third objective, the defense of the freedom of science, of publication of scientific results, and of discussion on all kinds of topics, in the five last chapters. According to the theory of the state developed in Chapters xvi–xx, the "*libertas philosophandi*" constitutes the very essence of a political society, as is likewise indicated in the formulation of the subtitle, "that this freedom can only be taken away (*tolli*) together with the peace and piety of the republic." Doctrinal prescriptions can only cause dissension, sectarianism, and schisms among the people, by which the freedom of the state (not to mention the possibility of sciences and arts) is necessarily undermined. A government which mixes itself in questions of theology will stimulate the fury of parties and change piety into rage. Dutch history had provided a tragic example of such a rage, which should

serve as a warning for all times that laws about religion are pernicious. This example was the battle between the Remonstrants and the Contra-Remonstrants, mentioned by Spinoza on the penultimate page of the *Theological-Political Treatise* (TTP xx.41). The puritanical Calvinists, together with Prince Maurice, had succeeded in bringing the state of Holland to the edge of the abyss. The great statesman of the time, the pensionary Oldenbarnevelt, a Remonstrant with liberal ideas, had to pay with his life (in 1619). It is to him that Spinoza cynically alludes in *Theological-Political Treatise* xx.35:

> What, I say, can be more hurtful than that men who have committed no crime or wickedness should because they are enlightened, be treated as enemies and put to death and that the scaffold, the terror of the delinquents, should become the finest theatre to show the highest example of tolerance and virtue to the sharp disgrace of the majesty?

Amsterdam, in contrast, was a positive example in the eyes of Spinoza. "In this most flourishing republic and excellent town people of all nations and sects live together with highest unanimity" (TTP xx.40). As a member of a community of political refugees, the minority of Portuguese Jews, Spinoza had had no notably bad experiences with the state authorities and their justice. But was Amsterdam still so tolerant in the late 1660s?

As Spinoza was writing his treatise, the situation worsened because of a serious economic malaise and the political isolation of the Dutch Republic. Intolerance was aggravated also, and came very close to Spinoza himself. To the circle of his friends and followers belonged a certain Adriaan Koerbagh, who had studied medicine and law in Utrecht and Leiden. He had (with his brother Johan) become persuaded by Spinoza's naturalism, and was also acquainted with Franciscus van den Enden. This man, only two years younger than Spinoza, started to spread all the essentials of the Spinozistic theory from 1665 onward, and published them in 1668, in plain Dutch.[41] His main work, *Een ligt*, was on many pages more open about Spinoza's esoteric doctrine than the *Theological-Political Treatise*. God is defined as "the essence of all modes of existence, consisting of infinite attributes, of which each one is infinite in its kind." The work as a whole may be considered as a parallel to the *Theological-Political Treatise*, with chapters on Essence (God is consequently called "*Wesen*"!), the Savior (Jesus), the Holy Spirit (reason), good

Treatise by the ministers of the Reformed Church, the work became a commercial success for the publisher, Spinoza's friend Jan Rieuwertsz. The gales of indignation could not withhold the presses from printing new editions. After five quarto editions in 1670, a series of octavo editions with misleading title pages was laid up. In 1673 the *Theological-Political Treatise* appeared as *Francisci Henriquez de Villacorta, doctoris medici Opera Chirurgica omnia* (Amstelodami: apud Jacobum Paulli). Another edition from the same year was baptized *Danielis Heinsii Operum Historicorum collectio prima. Editio secunda, priori editione multo emendatior & auctior. Accedunt quaedam hactenus inedita* (Lugd. Batav: Apud Isaacum Herculis). A third edition in octavo was named *Totius Medicinae idea nova, seu Francisci de le Boe Sylvii, medici inter Batavos celeberrimi Opera Omnia novas potissimum super morborum causis, symptomatis & curandi ratione meditationes & disputationes continentia* (Amstelodami: apud Carolum Gratiani).[50] Rieuwertsz was a courageous entrepreneur, not deprived of some humor. His shop, called *"In het Martelaersboeck"* (*In the Book of the Martyrs*), was a center of freethinkers' discussions in which news was exchanged between radical Cartesians and Spinozists.

Spinoza knew, however, that he had to be careful and that his life could be in danger when the common people were stirred against him. He had not forgotten the case of Adriaan Koerbagh, who had published his ideas in plain Dutch. Therefore, he tried with all available means to forestall the publication of the Dutch translation of his *Theological-Political Treatise*. On February 17, 1671, when he still enjoyed the protection of Jan de Witt, he wrote to his Amsterdam friend Jarig Jelles:

> When recently the professor . . . paid a visit to me, he told me among other things that he had heard that my *Tractatus theologico-politicus* was translated into Dutch and that somebody – he did not know who – intends to give it in print. Therefore I beseech you urgently to do your best to get information and, if possible, to prevent the printing. This is not only my request but also that of many of my friends and acquaintances, who would not like to see that the book would be forbidden, as will undoubtedly happen when it will be published in Dutch. (Ep 44)

Spinoza's fame, which had already begun to spread by 1665[51] now reached a higher pitch. His ideas reached through the whole of Eu-

rope: London, Paris, Florence, Rome, Stockholm, and other cities. The court of Heidelberg invited him for a professorship in the newly founded academy of the illustrious monarch Karl Ludwig of the Palts. But Spinoza did not hesitate to decline this offer. In his letter of invitation, the councillor Fabricius (who was himself against the invitation) had mentioned a condition that was impossible for Spinoza to fulfill because it did not depend on himself. He was to receive the amplest freedom of philosophizing ("*philosophandi libertatem*"), but it was expected that he would not "misuse it in order to disturb the publicly established religion" (Ep 47; February 16, 1673). Spinoza's answer was to the point: "I think that I do not know in what boundaries that freedom of philosophizing should be included in order not to make the impression that I have the intention to perturb the publicly-instituted religion." Spinoza did not want to take the risk. He had already experienced how easily he could be misunderstood and misinterpreted, even when he aimed for a very clear presentation of his thoughts. "And since I have already experienced this while leading a private and solitary life, how much more have I to fear this in case I will ascend towards such a degree of dignity" (Ep 48; March 30, 1673). Another reason Spinoza offered for not accepting the invitation was that it never had been his wish to be a professor with public teaching responsibility. The instruction of the youth would hinder him from being free for the promotion of science. The background of this argument must be the same as the other motive just mentioned: A man who is employed by certain authorities and paid for his academic work is in fact a subordinate, who has to keep himself to certain prescriptions and expectations, and has no full freedom of speech. As Spinoza wrote: "Academies that are founded at the public expense are instituted not so much to cultivate men's natural abilities as to restrain them. But in a free commonwealth, arts and sciences (*scientiae et artes*) will be best cultivated to the full if everyone that asks leave is allowed to teach publicly, and that at his own cost and risk" (TTP viii.49). A scientist must be completely independent. One's freedom is unavoidably restrained when one allows oneself to be paid for one's work.

It is not impossible that a third reason played a role in Spinoza's declining the invitation of Karl Ludwig, who was known to be a monarch with a free mind. Fabricius himself was an orthodox theolo-

gian who had studied reformed theology in Utrecht under Voetius and had many relations with Dutch Contra-Remonstrant theologians such as Frederik Spanheim. A certain J. H. Heidegger later said in his obituary of this Fabricius that Fabricius, after having read the "horrible book" (the *Theological-Political Treatise*), had told him that he hoped that this blasphemous material would never be allowed to enter and be promulgated inside the German borders. He further had remarked that he much preferred that similar pernicious opinions be suppressed rather than refuted.[52] In a small world with only a few networks of relationships this attitude of the Dutch Fabricius may have been known to Spinoza.

Another invitation, however, was not refused: Spinoza was asked by the general, the Prince De Condé, to come to the headquarters of the French Army in Utrecht. The sources (Bayle, Colerus) do not reveal the reason why he was invited. The prince was an "*esprit fort*" or libertarian, who could have wished to meet the famous Dutch thinker who had already entertained contacts with many other French libertarians. Spinoza, on the other hand, may have thought that he might profit from the opportunity to meet the French authorities, in order to do something in favor of his country, which was still in great distress because of the war with the French invaders. This latter seems probable, inasmuch as it was a principle of Spinoza's behavior to contribute as much as possible to the well-being of the state, wherever he could. "I am a sincere republican," he said (Colerus 1705: 38).[53] In any case, he made use of the passport presented to him and went to Utrecht in July of 1673. When he arrived there, the Prince de Condé was gone, having been called back by his superior, King Louis XIV. Colerus says that Spinoza conversed with Lieutenant Stouppe instead of with Condé. Our information remains too scarce to say anything definite on this curious visit of Spinoza to Utrecht. Did he have a permit or even a mandate from the States of Holland, or from the Stadhouder prince William III? One cannot imagine that Spinoza went without any political charge – perhaps the preparation of negotiations – to the camp of the enemy.

Stouppe, who had been a Protestant minister before he began his military career, published in the same year a small book on *La religion des Hollandais* in which he paid much attention to the influ-

ence of Spinoza's views on religion. Although he of course did not acknowledge it, he had first-hand information:

> I don't believe I have spoken enough about the religions of this country, if I have not said a word about an illustrious and learned man, who, as I have been assured, has a great number of followers (*Sectateurs*) who are wholly attached to his sentiments. It is a man born as a Jew, who is called Spinosa, who has not abjured the religion of the Jews neither embraced the Christian religion; he is therefore a very bad Jew nor a better Christian. Before some years he has written a book in Latin, of which the title is *Tractatus Theologico-Politicus*, in which his main objective is the destruction of all religions, particularly the Jewish and Christian religion, and to introduce atheism, libertarianism (*le Libertinage*) and freedom in all religions. He maintains that they are altogether invented for public utility, with the purpose that the citizens live honestly and obey their magistrates, that they keep themselves virtuous, not in the hope of a compensation after death, but simply for the excellency of virtue itself and for the advantages for virtuous people in this life. (Freudenthal 1899: 195)

Spinoza must have been disappointed by the many refutations of the *Theological-Political Treatise* he saw appearing in the bookmarkets. Whoever had some influence in public life or in the academies seemed to turn himself against Spinoza, if only to protect himself against suspicion. But he could also be ironic about what he found. Concerning the refutation of a Reinier van Mansvelt, a professor in Utrecht, whose book he had seen in the window of a bookseller, he wrote to his friend Jelles: "And laughing to myself, I pondered how precisely the ignorant are the first with their pen and most audacious in their writing" (Ep 50).

Spinoza was not a pessimistic type nor an ascetic, and had a positive attitude towards anything that could contribute to his well-being. He enjoyed the good things of life, including a glass of wine and a pipe of tobacco, and wrote in a letter that "I seek to pass my life not in sorrow and sighing, but in peace, joy and cheerfulness."[54] It was not his custom, however, to laugh publicly at other people or to despise them. He wrote that it was his principle "to try, not to laugh at human actions neither to mourn about them or to detest them, but to understand them" (TP i.4).[55] Spinoza does not say that he always succeeded, but only that he earnestly tried to follow this maxim. It is well known that he sometimes failed and confessed as much, saying (with Terence): "Nothing human is alien to me."[56] It is

not my intention to make a saint of Spinoza, who himself was deeply convinced of everyone's weakness, including his own. His way of life, however, was sober and honest. He did not seek after superfluous goods.[57] This conduct constituted a problem for many people: How could an atheist behave so virtuously? That was also the problem of one of his later biographers, Pierre Bayle, after he had to characterize him as *"un homme d'un bon commerce, affable, honnête, officieux et fort règlé dans ses moeurs"* (Bayle 1697: 347).

During the life and government of Jan de Witt, the supreme court of Holland had already tried to prohibit officially the printing and spreading of the *Theological-Political Treatise*, but the Grand Pensionary had succeeded in preventing this prohibition. After the political change, the situation was quite different in this respect. In July of 1674, the Court of Holland published a *"placcaet"* against some harmful books, among which was the *Theological-Political Treatise*. Spinoza must have felt this as a bitter disappointment. In the text of the announcement, his book was declared one of the "sacrilegious and soul-destructive books, full of unfounded and dangerous propositions and horrors, to the disadvantage of the true religion and church service." Severe punishments were put on the printing, promulgating, or selling of those books.

By this act of the judicial – that is, political – authorities he, who so loved his country and its much-praised freedom, had become infamous, a subject for further defamations. Many famous scientists from all over Europe had paid visits to him and discussed the progress of arts and sciences. Now it became more and more quiet in his apartment. One of his best friends and followers, the young Baron von Tschirnhaus, who was at the time in Paris, asked him whether he could pass manuscripts of parts of his *Ethics* to a certain Gottfried Leibniz, who had consulted Spinoza some years earlier about questions of optics. Spinoza refused to give him the permission: "I don't think it advisable to entrust my writings so quickly to him. I first would like to know what he is doing in Paris" (Ep 72). What was the reason? No doubt he was not convinced of the sincerity of Leibniz, of his endeavor to strive only after truth. But we may guess also that another thing made Spinoza fear bad consequences. It was not unlikely that the spreading of his *Ethics* would have had repercussions for his life. His master Van den Enden, who had lived in Paris since 1670, had been arrested and sentenced to death, for his political

mine about God was on the press and that I tried to demonstrate in it, that there is no God. This rumor was believed by many. Certain theologians, (probably themselves the authors of this rumor) were occasioned by it to complain about me to the Prince and the magistrates. Further stupid Cartesians – probably in order to clear themselves from the suspicion that they sympathized with me – did not stop to express their abhorrence over my opinions and writings; and they still continue doing so. When I had heard this from certain credible men, who likewise warned me that the theologians set everywhere traps for me, I decided to postpone the publication which I was preparing and to wait first how things would develop; and I planned to tell you later what I was going to do. *But it seems that the situation is becoming worse from day to day; and I don't really know what I have to do.* (Ep 68; emphasis added)

Ultimately, Spinoza was anxious and felt himself insecure, perhaps also alone. He had no contacts with relatives. Many good friends, like Simon Joosten de Vries and Pieter Balling, had died; others had been persecuted until death, like Koerbagh, Jan de Witt, and Franciscus van den Enden. Two of his former comrades (Niels Stensen and Albert Burgh) had converted to Roman Catholicism and now tried to draw him towards orthodoxy.[60] Oldenburg, his first correspondent, could not follow his radical determinism and secularism; he beseeched him, in effect, to change his mind. What would happen to him? "*Sub specie aeternitatis,*" death was not noxious. In the last part of the now finished *Ethics* he had written "that death is less harmful to us, the greater the Mind's clear and distinct knowledge, and hence, the more the Mind loves God" (E 5p38s). But he remained a human being, like everyone else, with fears and hopes, liable to passions, caught by imaginations of all kinds. Clear insights into the eternal laws of nature and reasoning could not dispel from his mind the "first" (lowest, imaginative) kind of knowledge, although they helped him to acquiesce in the unavoidable processes and defeats of human life.

His health left much to be desired. In his correspondence, Spinoza now and then intimated to his friends that not everything was well with him and that he sometimes had to excuse himself on account of not being able to work. Lucas says that he died in midlife, "after having suffered during the last years of his life." According to Jelles it was the "*tering*" (phthisis, or consumption) which caused him many troubles. But the situation was not always so bad that he could

not work. His interest in the well-being of the state was so deeply rooted in his mind that he could not refrain from a new endeavor to contribute to it. After hiding in his desk the text of the *Ethics*, brought home from the fruitless trip to Amsterdam, he laid new blank paper on it. Spinoza now began to present a political architecture in a treatise, the *Political Treatise*, in which he demonstrated how different types of political societies (monarchies, aristocracies, democracies) should be organized in order to make them stable and secure for their citizens. He had gathered considerable material for his proposals from his reading of the books of the brothers De la Court; the works of his master Franciscus van den Enden, including his lecture on Machiavelli; and the Roman historians such as Livius, Tacitus, Curtius, and Flavius Josephus. What is more, he now could also use the laws of human behavior, formulated and deduced in Parts 3 and 4 of the *Ethics*, for his new enterprise.

Jarig Jelles wrote in his Preface to the *Nagelate Schriften:*

> Our writer has made the Treatise about Politics not long before his death, which also prevented that it could be finished. His thoughts in this treatise are very accurate and his style is clear. Without discussing the opinions of many political writers, he proposes in this work his conception very solidly and draws everywhere conclusions from his premises. (Freudenthal 1899: 248)

Jelles reported that a work about "the nature of motion and in what way the differences in matter could be deduced a priori" was also on his program, had life given him the opportunity. We also read about this intention in the correspondence with Tschirnhaus. In Letter 59, Tschirnhaus asked about Spinoza's *Generalia in physicis* and when he could expect the publication of this work. Spinoza answered in Letter 60 (January 1675) that "he had not yet orderly composed" this material and that Tschirnhaus, therefore, would have to wait until another occasion. A short *Algebra* was likewise still on the list of works to be written according to Jelles.

Spinoza had not enough time to accomplish all the things he wished.[61] Many of his works remained unfinished – the *Treatise on the Emendation of the Intellect, Descartes's "Principles of Philosophy (Part III)"*, the *Political Treatise*, the *Compendium of Hebrew Grammar* – while others were not more than planned. Only the *Theological-Political Treatise* and the *Ethics* lay before us in perfect

completeness. Yet we need not be discontent about the fruits of his life. I fully agree with the fine words of his friend J. M. Lucas: "*Ses jours ont été courts; mais on peut dire néanmoins qu'il a beaucoup vécu*" (Freudenthal 1899: 23). His life lasted not more than forty-four years, but its significance can hardly be equaled by other lives. He "lived much," though not long.

Death arrived on the 23rd of February in 1677. Colerus carefully inquired into the circumstances of it by checking the original documents. He says (three times) that the Amsterdam "*medicus* L. M." (Lodewijk Meyer) was with Spinoza in his last days and was also present at his deathbed. He assures us that Spinoza did not take opium in order to die insensible of pain. He only took the bouillon, which the wife of the landlord Van der Spyk had cooked from a chicken on the request of Lodewijk Meyer. Being very thin from the disease he had had for many years, he must have expired quietly, from lack of power. His manuscripts were immediately sent to Amsterdam:

> The still-living landlord of Spinoza, Mr. Hendrik van der Spyk tells me, that Spinoza had ordered that after his death his desk with the writings and letters lying in it would be sent without any delay to Jan Rieuwertzen, cityprinter in Amsterdam, as he also has executed. And Jan Rieuwertzen, in his answer to the aforementioned Mr. van der Spyk, dated Amsterdam the 25th March 1677 confesses to have received such desk. The last words of this letter were: "The friends of Spinoza wanted to know, to whom the desk was sent, since they judged that it contained much money and they intended to call in upon the skippers to whom it was delivered. Because in The Hague the packets delivered on the towboat are not registered, I don't see how they could get it to know. It is best that they don't know it." (Colerus 1705: 51)

In an earlier letter dated March 6, Jan Rieuwertsz had written to Van der Spyk that he stood surety for all costs of the burial and that the friend of Schiedam (a brother of Simon Joosten de Vries) had paid to him the rent which Spinoza owed for the apartment (Colerus 1705: 78). Van der Spyk had to dispose of the body. Colerus continues with his report: "On the 25th February the corpse was buried in the New Church on the Spuy with 6 state-carriages (*karossen*) and shown out by many persons of high rank (*aanzienlijke luiden*). . . . Coming from the burial the friends drank, according to civil custom, a glass of wine."

Six coaches drawn by horses on a cold or misty day with prominent and distinguished people followed the corpse! No, Spinoza had not been entirely alone in his last years. The bigots had attacked him increasingly,[62] but among intelligent people, and evidently many highly placed persons, he had become a much respected man. The "*grand nombre de sectateurs,*" about which the French colonel Stouppe had spoken, was as it were visualized in the spectacular funeral of the humble philosopher. Bayle testified that "*les esprits forts accouraient àlui de toutes parts*" (i.e., that the libertarians came to him from all sides). One may suppose that many of those political persons and *esprits forts* paid him the last honor.

Before they were sold, the books of Spinoza's library were put on a short title catalog which has come down to us.[63] It is worthwhile to examine this list, since it may convince one about Spinoza's fields of interest and the sources he used.[64] The collection is one of a scientist who wanted to keep abreast of developments in various fields of research. Most books are about mathematics, mechanics, astronomy, anatomy, chemistry, grammar, biblical hermeneutics, classical literature,[65] political history and theory, or Spanish literature. There are only very few items which would fit in philosophical libraries of today. Aristotle is present in a Latin edition, but Plato is absent. The works of Descartes, in contrast, are represented with many editions, including a Dutch translation.

J. M. Lucas concluded his obituary with the words "*Baruch de Spinosa vivra dans le souvenir des vrais Sçavants*": Spinoza will survive in the memory and the practice of the true scientists (Freudenthal 1899: 24). This may be verified by looking to the work of his friends after his death. Tschirnhaus, for example, a friend who was very concerned about the precise meaning of Spinoza's propositions, as is manifest in the correspondence, dedicated his life to mathematics and medicine. His Spinozistic naturalism is elaborated in his *Medicina mentis sive Artis inveniendi praecepta generalia* (Tschirnhaus 1686).[66] On many pages he insinuates his adherence to Spinoza's principles and propositions. The human mind is only cured from its errors by the "science of nature."

I know that many will disagree with me when they read this. The reason of this is not unknown to me. Until now they did not form yet a correct idea of the physics about which I speak neither did they recognize or taste in effect

its fruits. By physics I understand nothing else than the science of the universe demonstrated a priori by the rigorous method of the mathematicians and confirmed a posteriori by the most evident experiences which even convince the imagination. . . . This science is truly divine. One here exposes the laws . . . according to which everything produces invariably its effects. The knowledge of this sciences liberates us also of innumerable prejudices. . . . In this way, through the mediation of the true physics, one becomes so to say a completely new man and one is regenerated philosophically. . . . One learns here to see the things from a higher point of view and to consider that nothing is more evident for the understanding than our continuous dependence on God alone, which is such that we cannot even raise our hand or produce a thought and, in a word, that never, neither in our mind nor in our body, can we absolutely do anything without the actual concurrence of God. . . . Ultimately *thanks to physics* we are prepared for still more important knowledge.[67] Since when we bring the study of all the general items of this science to a good end, then not only the knowledge of our mind and its eternity, but also of God himself, of his real and necessary existence and his infinitely perfect attributes . . . becomes clear and evident for us. (Tschirnhaus 1686: 245–7; emphasis added)

Thus was Spinoza's legacy interpreted and practiced by one of his most intelligent correspondents: Human salvation and happiness are the products of human understanding of the laws of nature, a kind of science which is the privilege of everyone but may be professionally improved in physics. It can be shown from various documents[68] that Spinoza's Amsterdam friends continued his work as linguists and mathematicians. This was the way Spinoza's reception was in fact realized: not by philosophizing about the end of life and proper morals, but by doing science as Spinoza himself had always done. An interesting example of this naturalistic Spinozism is Burchard de Volder, who once had been in contact with Spinoza in Amsterdam. He was appointed a professor in (traditional) philosophy in the Leiden University, but soon afterwards asked permission from the Curators to lecture on physics and mathematics.[69] He began a tradition of natural science which became famous with the name of Boerhaave.[70]

The *Opera Posthuma* were published in the year of Spinoza's death, 1677. The title page showed the initials "B. d. S." but not the name of the author or of the publisher, Rieuwertsz.[71] Apart from the *Ethics*, the *Correspondence* and the *Political Treatise*, the work also

17 For a fine analysis of the introductory section of the *Treatise on the Emendation of the Intellect*, see Zweerman 1983.

18 The works of Da Costa are collected and annotated in Osier 1983. For a survey of the problems in the Amsterdam community, see Albiac 1987 and Fuks-Mansfeld 1989.

19 See Thijssen-Schoute 1989 and Verbeek 1988.

20 Hudde, at the time already known as a young mathematical genius, would very soon become one of the most influential politicians of Amsterdam, in which town he acted as a burgomaster for more than twenty-five years. For a short biography and bibliography, see Klever 1989a.

21 See further my publication of these documents in Klever 1989b.

22 See now his *opus magnum*, Mignini 1986a.

23 See my publication of the findings in *NRC Handelsblad* (May 8, 1990).

24 See Van Suchtelen 1987. It may be demonstrated that Van den Enden's interest in politics dates at least from 1648, when he played a role in the Peace of Münster, and 1650, when he republished a Dutch political pamphlet, in which the sovereignty of the States of Holland and West-Friesland was defended against the claims of the king of Spain.

25 See *Treatise on the Emendation of the Intellect* 13–14:

> This, then is the end I aim at: to acquire such a nature, and to strive that many acquire it with me. That is, it is part of my happiness to take pains that many others may understand as I understand, so that their intellect and desire agree entirely with my intellect and desire. To do this it is necessary . . . to form a society of the kind that is desirable, so that as many as possible may attain it as easily and surely as possible.

26 This letter (Letter 67A, dated 1675 in Spinoza 1928) was published, not written, in 1675.

27 Glauber's *Miraculum mundi* (1660) was in fact an essay on saltpeter.

28 See Klever 1988d.

29 Letter 8, written by Simon Joosten de Vries on 24 February 1663, says: "Next, I thank you very much for *your writings*, which were imparted to me by P. Balling and which have given me great joy, particularly the remark to proposition 19" (emphasis added), from which we may conclude that a first part of the later *Ethics* belonged to the writings sent. Spinoza reacted in Letter 9 to the "questions proposed in your circle." It is important to take notice of the fact that Spinoza had urged his friends to imbibe the whole of natural science. This is presupposed in De Vries's closing remark: "I have entered an anatomy course (*collegium anatomiae*), and am about half through. When it is finished, I shall begin chemistry, and *following your advice* (*suasore te*), go through the whole Medical Course" (emphasis added).

30 The full title is: *Philosophia s. scripturae interpres; Exercitatio Paradoxa, in qua, veram Philosophiam infallibilem S. Literas interpretandi Normam esse, apodictice demonstratur, & discrepantes ab hac Sententiae expenduntur, ac refelluntur*. A Dutch translation by the author himself appeared in 1667. There is also a recent French translation, Meyer 1988.

31 He writes that "I have kept this treatise already some years from the press."

32 See Zac 1965; Matheron 1969; Meyer 1988. See Klever 1990c.

33 The italicization is in the text of Meyer and must be read as a literal quotation from what Spinoza said.

34 This text, written in the years 1669–71 and recently edited by A. J. E. Harmsen (*Nil Volentibus Arduum* 1989) contains many essays from the pen of Bouwmeester and Meyer, in which one may easily recognize the influence of their conversations with Spinoza and Van den Enden. Meyer wrote, to give only one striking example, in the first chapter:

> Everybody is bound by nature to seek his own well-being; and the more capacities my fellow-man have to further my well-being and the more I have to expect from him, the more also am I bound to seek his well-being in which the aforesaid capacities are contained. This is the ground, on which stand all teachings and instructions and whatever one would be able to do for his fellow-man. And nobody directing his behavior to the right reason will toil and moil with work for another, without the expectations that some fruit from this labor will return to him. (*Nil Volentibus Arduum* 1989: 31)

Compare this passage with the already quoted *Treatise on the Emendation of the Intellect* 13–14. For more information about *NVA* see Van Suchtelen 1987.

35 See Proietti 1989c.

36 Relevant literature includes: Spinoza 1968; Klijnsmit 1986; Levi 1987; and Porges 1924–6.

37 For a more elaborate discussion of all aspects of Spinoza's optics, see Klever and van Zuylen 1990.

38 The quotation is from E 5p23s.

39 He also did experiments in hydrostatics (Letter 41) and metallurgy. See Klever 1987.

40 As noted earlier, the meaning of the seventeenth century word "*philosophia*" is not the same as the meaning of our twentieth-century "philosophy" but is indeed closer to that of our "science."

41 First in *Een Bloemhof van allerley lieflijkheyd sonder verdriet door Vreederijk Waarmond / ondersoeker der waarheyd / tot nut en dienst*

van al die geen die der nut en dienst uyt trekken wil. Of een vertaaling en uytlegging van al de Hebreusche / Grieksche / Latijnse / Franse / en andere vreemde bastartwoorden en wijsen van spreeken . . . , a dictionary in which foreign words from theology, medicine and law were explained. Then also a systematical work: *Een ligt schijnende in duystere plaatsen / om te verligten de voornaamste saaken der Godsgeleertheyd en Gods-dienst / ontsteeken door Vreederijk Waarmond / ondersoeker der Waarheyd. Anders Adr. Koerbagh.* The text of *Een Ligt* is republished in a critical edition by H. Vandenbossche, Koerbagh 1974. Also see: Vandenbossche 1978; and Evenhuis 1971: IV,351–61. At his trial, Koerbagh explicitly confessed, "that he was in contact with Spinoza and had visited him sometimes."

42 The work is masterfully written, testifies to the strong ability of the author in linguistics and natural science, and is a first class anti-theological treatise which deserves to be taken into consideration by Spinoza scholars. One must conclude that the *Theological-Political Treatise* is only one of many similar writings from members of the Amsterdam circle, which all defend the same ideas. I have already mentioned Balling's *Licht op den kandelaar* (1662) and Meyer's *Interpres* (1666), but one must also mention Jelles's *Belijdenisse des algemeenen en christelijken geloofs* (1673).

43 "Hamburgi, apud Henricum Künraht" instead of "Amsterdam, Jan Rieuwertsz." Spinoza later (around 1675) made many annotations, some of which were quite long, to the text of the *Theological-Political Treatise*, which were first published in the original Latin by Chr. Th. de Murr in de Murr 1802. They were earlier published in French as *Remarques curieuses et necessaires pour l'intelligence de ce livre*, added to the French translation of the *Theological-Political Treatise* by Saint-Glen, which first appeared under the title: *La clef du Sanctuaire* ([Spinoza] 1678). For an erudite discussion of the problems around these annotations and their variants, see Totaro 1989.

44 See Van Bunge 1989.

45 For the later relations between Spinoza and Van Velthuysen see my monograph, Klever 1990d.

46 The last two quoted phrases are from J. M. Lucas, in Freudenthal 1899.

47 J. M. Lucas (Freudenthal 1899: 15) writes: "He had the advantage to be known by the sir pensionary De Witt, who wished to learn from him mathematics and who gave him often the honor to consult him on important matters." The relationship between Spinoza and De Witt is confirmed by Sebastian Kortholt in the preface to Kortholt 1700, where it is said that Spinoza would have preferred to be torn to pieces "with the De Witts, his friends" than to look after vain glory.

48 Lucas confirms this writing, "that he shed many tears when he saw how his fellow citizens lacerated their common father" (Freudenthal 1899: 19).

49 The story seems to be truthful, since there is no reason why Leibniz would have fabricated it. We know moreover, that Spinoza was well read in Suetonius, in whose *The twelve Caesars* one finds an expression which is very close to "*ultimi barbarorum,*" namely "*ultimi Romanorum.*" This expression could have inspired Spinoza to his crypto-citation.

50 For full and precise bibliographical information see Kingma and Offenberg 1977.

51 Spinoza's name "*coepit inclarescere.*" See Klever 1989c.

52 See John Henrico Heidegger, *Joh. Ludovici Fabricii Theologi Archipalatini Celeberrimi Opera Omnia quibus praemittitur Historia Vitae et Obitus ejusdem* (Tiguri: Gessner, 1698).

53 Cf. Sebastian Kortholt's remark in Kortholt 1700: 27, "*Politici enim nomen affectabat*" – he wanted the name of a politician, i.e., a good citizen.

54 The passage appears in Letter 21, to Blijenbergh. A persuasive presentation of this attitude also occurs in *Ethics* 4p45s2:

> My account of the matter, the view I have arrived at, is this: no deity, nor anyone else, unless he is envious, takes pleasure in my lack of power and my misfortune; nor does he ascribe to virtue our tears, sighs, fear, and other things of that kind, which are signs of a weak mind. . . . To use things, therefore, and take pleasure in them as far as possible – not, of course to the point where we are disgusted with them, for there is no pleasure in that – this is the part of a wise man. It is the part of a wise man, I say, to refresh and restore himself in moderation with pleasant food and drink, with scents, with the beauty of green plants, with decoration, music, sports, the theater, and other things of this kind, which anyone can use without injury to another. For the human Body is composed of a great many parts of different natures, which constantly require new and varied nourishment, so that the whole Body may be equally capable of all the things which can follow from its nature, and hence, so that the Mind also may be equally capable of understanding many things.

55 See also Letter 30, *Ethics* 2p49s, and the Preface to *Ethics* Part 3.

56 One example is his anger consequent on the murder of the brothers De Witt. Another example is indicated in a letter of Philippus van Limborch to Jean Le Clerc (January 23, 1682) in the University Library of Amsterdam (printed as appendix 10 in Meinsma 1896): "I remember that I was six years ago invited to a dinner, to which beyond my expectation also

this author was present. During the prayer he showed signs of an irreligious soul by means of gesticulations by which he seemingly tried to demonstrate our stupidity in praying to God."

57 *"Les richesses ne le tentoient pas."* He tried to be economically self-supporting by means of grinding and selling lenses. S. J. de Vries wanted to grant him 2,000 guilders but Spinoza refused to accept the gift. A yearly pension of 500 guilders, offered to him by the brother of that friend (the De Vries from Schiedam) was, at his request, reduced to 300 guilders (Freudenthal 1899: 17–18).

58 See Vermij 1988.

59 Compare Spinoza's definition of *"individuum"* in the physical excursus following *Ethics* 2p13.

60 See the interesting remark of Proietti 1989c: 266: *"Il 1675 rappresenta un punto di crisi e di svolta per il cammino intellettuale di Spinoza."* The year 1675 represents a turning point in Spinoza's life. He now puts everything aside (see Letter 84) for the transition from the theological-political to the political order. Spinoza prepares for a decisive battle: *"un intervento politico di natura teorica." "C'è battaglia aperta, nuova, decisiva e ultima"* (Proietti 1989c: 269).

61 Jelles sees Spinoza's "untimely" death as a confirmation of a general rule: "But the death has demonstrated that human intentions are seldom executed" (Akkerman 1980: 254).

62 To mention a few of them: Van Blijenbergh 1674; Mansvelt 1674; Cuper 1676; Melchior 1671; Batalier 1674; Musaeus 1674; Spizelius 1675. Spizelius calls Spinoza a "most irreligious author." Mansfelt says that the *Theological-Political Treatise* should be condemned forever. Similar remarks are made by the other authors.

63 The list may be found in *Catalogus van de bibliotheek der Vereniging 'Het Spinozahuis' te Rijnsburg*, Leiden: Brill, 1965. A more extended description appears in the *Catalogus van de boekery der Vereniging Het Spinozahuis* (n.d.). The list is also printed in Préposiet, J. *Bibliographie spinoziste*, Besançon: Centre de Documentation (n.d.).

64 See Vulliaud 1934.

65 The authors here are: Tacitus, Livius, Virgilius, Arrianos, Petronius, Lucianus, Julius Caesar, Seneca, Sallustius, Martialis, Plinius, Ovidius, Plautus, Cicero, Curtius, and Justinianus.

66 There is also a French translation, with introduction and notes: Tschirnhaus 1980.

67 *"Grâce à la physique nous sommes préparés à des connaissances beaucoup plus importantes encore."*

68 See Klever 1991a.

69 See Klever 1988a.

(2) Concept dualism. The concepts pertaining to the material aspects of things have no overlap with the concepts pertaining to thought. No fact about the realm of thought has any logical relations with any fact about the realm of matter. This intensely Cartesian assumption of Spinoza's is expressed by him in the statement that mentality and materiality (or, as he said, thought and extension) are "attributes," that is, fundamental and mutually nonoverlapping ways that things can be.

(3) Impact mechanics. Bodies affect one another only through impact – there are pushes but no pulls, repulsive forces but no attractive ones. Spinoza shared this assumption with Descartes; it was also accepted by Locke and Leibniz; the former recanted in face of the evident success of Newton's *Principia*, but Leibniz held firm even then. The price to be paid for denying "traction" was high: It included a complete inability to explain "cohesion," that is, the fact that some portions of matter clump together to form separate things. But there was a reason for it, namely that traction cannot be explained by the basic nature of matter, whereas repulsion can. From the supposedly necessary truth that bodies are mutually impenetrable it follows that if body A moves into a region which contains body B, the latter must move away. That does not yield any particular laws, but it does yield – as absolutely necessary – the result that there is such a causal phenomenon as impulse, this being required by the essence of body as such; whereas there is no comparable reason why there must be traction. As Leibniz said, if there is traction it is "miraculous." In his mind as presumably in Spinoza's, explanatory rationalism is at work in this area.

(4) Size neutrality. There is nothing special about being small. It was common ground in the seventeenth and eighteenth centuries that small things differ from large ones only in size. C. D. Broad called this a blank check that philosophers wrote on Nature's bank and that did not visibly bounce until late in the nineteenth century.

2. TWO PROBLEMS

The two biggest problems that Spinoza's metaphysic was meant to solve are these:

(i) What material substances are there? That modest question poses a problem for anyone who believes, as did many seventeenth-

century philosophers and physicists, (a) that whatever is material is spatially extended, (b) that any extended thing, however small, is splittable into parts which can go their separate ways, and (c) that if something is splittable it is not a substance but, at best, an aggregate of substances. It seems to follow that there are no material substances, which is to say that if the world is made up of basic things they are not bits of matter. Since it looks as though the world is made up of bits of matter, this is a problem. Premise (a) comes from the assumption of size neutrality, which stopped philosophers from thinking of the possibility – which did occur to Kant – that extended things might be made up of physical points, and that the extension of familiar matter results from each point's exerting force throughout a region. Premise (b) is true if impact mechanics is the whole of physics, but otherwise might be false. Premise (c) does not need much explaining; but observe that it overlooks the possibility that there are no substances (basic things) although there is substance (basic stuff). I shall begin expounding Spinoza's solution to this problem in section 3.

(ii) The facts about the world in its mental aspects clearly have something to do with the facts about it under its material aspects: It is not a coincidence that a person's sensory states correlate somewhat with how things are in his material environment, or that physical damage is associated with pain, or that wanting something is more likely to be associated with getting closer to it than moving away from it. Something systematic is going on here; what is it? The obvious answer is that it is causal interaction: Sensory states are caused by the environment, pain is caused by damage, bodily movements are caused by desires. That answer, however, is forbidden to Spinoza. His strong understanding of causal connection implies that there are causal links only where there are what we would call conceptual connections: Minds do not act upon bodies or vice versa unless there are suitable conceptual overlaps between the two realms. Concept dualism is precisely the denial that there are such overlaps. Spinoza boldly concluded that the mental and material realms are causally fenced off from one another, but he needed to explain the appearance of interaction as something other than an absurd, brute-fact series of coincidences. He had, therefore, a problem: There is a systematic relation, and it is not causal; so what is it? I shall start on this topic in section 10.

3. SUBSTANCE MONISM

According to Spinoza there is only one substance, namely the whole world, which he usually calls "Nature" or "God." His official argument for this substance monism (E 1p14d) has satisfied nobody. It goes like this:

(a) There is a substance that has every attribute.
(b) There cannot be two substances that have an attribute in common.
(c) There cannot be a substance that has no attributes.

Therefore:

(d) There cannot be two substances.

The argument is valid, and premise (c) seems to be true. But (a) depends on a special version of the "ontological argument" for the existence of God (E 1p11d), which is no sounder than any of the other versions of that notorious paralogism. It infers God's existence from God's being by definition a substance. Spinoza accepted the then standard view that no substance can depend on anything else for its existence; so any substance must depend on itself for its existence. This sounds like self-causation, which is not clearly meaningful, but Spinoza found a way of interpreting it that, he thought, enabled it to make sense. He takes the self-dependence of a substance in a logical rather than a causal way, saying that the existence of any substance is explained by the substance's nature, by which he means that the substance has a nature which absolutely must be instantiated. (In Spinoza's terminology, the essence of a substance involves existence.) So God, or a substance which . . . etc., necessarily exists.

As for the argument for (b): Even Spinoza scholars for whom charity comes first agree that this argument (E 1p5d) seems to be confined to substances that have only one attribute each. Two such substances that shared an attribute would (trivially) share every attribute, but that does not yield the substance monism that Spinoza wants. There could be hundreds of substances, each with a different selection of attributes and only one having all the attributes.

However, there is a much better route than *Ethics* 1p14d to the conclusion that there is only one substance – an argument that goes

by respectable moves from premises for which Spinoza had reasons. One premise in this unofficial argument says that there is only one *extended* substance. The second premise says that any thinking that gets done must be done by extended substances. Those two premises entail that the world of thought and extension consists of only one substance, which both thinks and is extended. I believe that this route to his substance monism was at work in Spinoza's mind; otherwise it is a sheer coincidence that a solid Spinozistic case can be made for a doctrine for which Spinoza offered such a rickety official argument. In this respect as in some others, I submit, his official apparatus of "demonstrations" is not a good guide to his actual reasons for his metaphysical doctrines.

The better argument, which I shall start on in section 4, involves two of the world's "attributes," namely extension and thought. However, Spinoza seems to imply that there are others – he says indeed that God or Nature has "infinite attributes." Surprising as it may seem, there are reasons to think that by this Spinoza did not mean anything entailing that there are more than two attributes. (i) Thought and extension are the only two attributes that play any active role in the *Ethics*. (ii) The role of infinity in *Ethics* 1p14d shows that Spinoza takes "God has infinite attributes" to entail that God has all the attributes. This entailment does not hold when "infinite" is used in our way; so Spinoza's meaning for the term differs from ours, and the question is, "How?" One possible answer is that he used "infinite attributes" to mean "all (possible) attributes," so that Nature's having infinite attributes is consistent with its having only two. (iii) Spinoza has a solid, intelligible reason for saying that Nature has all attributes: If there were an attribute – a basic way of being – that was not instantiated, nothing could explain this fact, and that conflicts with explanatory rationalism. There is on the other hand no respectable reason for Spinoza to say that Nature has (in our sense) infinitely many attributes. (iv) He gets "infinite attributes" into the story through his statement that God has infinite attributes, and we should ask why. Spinoza's use of the term "God" as one name for the natural world is evidently based on his believing that descriptions of God in the Judeo-Christian tradition come closer to fitting the natural world than to fitting anything else: infinite, not acted on from the outside, not criticizable by any valid standard, omniscient (in the sense of containing all the knowl-

edge there could possibly be), omnipotent (in the sense of being able to do anything that it is possible for anything to do). If in that spirit the attribution to God of "infinite attributes" is to be justified, it must be through the tradition that God is the *ens realissimum*, the most real being, the being that exists in every basic way in which it is possible to exist. That leads us to God's having all (possible) attributes, and does not entail anything about how many of them there are.

On the other hand, it was a little perverse of Spinoza to say "infinite" if he only meant "all." And in his last two letters he addresses the question of how it is that we do not know anything about any attributes except thought and extension. The mere fact that he faces the question does not show that he was convinced that there are more than two attributes. He certainly did not rule out there being more than two, so that he needed to explain how it *could* happen that there are attributes with which we are not acquainted. (His explanation of this is bad.) Still, if he really thought that there *might* be only two, and did not mean to have implied otherwise, it is strange that he does not say so in these letters.

4. MONISM ABOUT EXTENDED SUBSTANCE

Spinoza believed, and had good reason for believing, that there is just one extended substance, namely the entire extended world – not the totality of all matter, but the totality of everything that is extended. If space extends beyond the edges of the *material* world, then all that extra space is also part of the extended substance (and in that case the difference between matter and space does not show up at the level of basic metaphysics). This candidate for the role of "an extended substance" is unique in not being splittable: It cannot be split from side to side, because it is infinite in all directions and has no sides, and it cannot have pieces taken away from it because there is nowhere for them to go. We can make divisions within it, but not of it.

This puts it in strong contrast with any lesser, finite portion of the material world. Every such portion is divisible, Spinoza thinks; there are no atoms. So every such portion is an aggregate (and thus not a single substance), and can be destroyed by dissipation (and is thus not substantial); and can be acted upon from the outside (which

that Spinoza held it. What is at issue is whether that was *all* he meant when he said that the whole world is the only extended substance and that finite bodies are modes of it. To say that it was is to credit him with good sense but not with boldness or originality, yet the latter virtues are commonly thought to be more typical of him. Curley's reading of substance monism has another count against it too: Nothing in Spinoza's uses of "substance" and "mode" prepare us for these terms' being stripped of what had hitherto always been the more central and important part of their meaning. The main thing in Curley's favor was the lack of any story about how bodies could conceivably relate to the extended world as blushes do to faces.

That lack has been made good. Curley is on record as agreeing that in my *Study of Spinoza's Ethics* (Bennett 1984) I have presented a basically coherent metaphysical story according to which finite bodies do indeed relate to the extended world as blushes do to faces or as falls do to sparrows. Although he agrees that his challenge has been met, Curley is not convinced that Spinoza really did mean to advance the metaphysic which I have attributed to him, and he stands by his theory that Spinoza thinned out the meanings of "substance" and "mode." Our interchange on the issue occurs elsewhere, and will not be repeated here. (See Curley 1991b, and Bennett 1991.) In this chapter I stand by the interpretation of Spinoza presented in my book, the outlines of which I shall now present.

5. FINITE BODIES AS MODES

Start by thinking of the one extended substance as *Space*, which can be arbitrarily divided into regions shaped however you like and any size you like. (These regions do not compete with Space for the title of substance or most basic kind of thing because no region is privileged: There are no constraints on how finely or coarsely Space can be "divided" into regions.) Now, consider a pebble P which exactly fills a certain region R. We think that R existed before P moved into it, and will exist when P moves on, but right now P and R exactly coincide. That makes it sound as though P and R are two extended items that have exactly the same coordinates, items of kinds that enable them to be precisely co-located, which we assume two material things could not be. If we do not like that account of the situa-

tion (and nobody does), it seems that we must give primacy to either P or R: Either there is a pebble here, and the so-called region is to be explained away, or there is a region, and the so-called pebble is to be explained away. Leibniz took the former option, Descartes and Spinoza the latter.

If primacy is given to the pebble (not necessarily saying that it is fundamentally real, but giving it more reality than the region), what is to be said about the region? Descartes anticipated one answer to this, namely that the region is *nothing* (Descartes 1985: II,18). He attacked this through an argument that is approvingly echoed by Spinoza: If the region is nothing, then if the pebble is annihilated there will be nothing between the pebbles that now touch its opposite edges; if there will be nothing between them then they will be in contact; since they are not now in contact, that means that they will have moved; so we get the result that the annihilation of one thing will absolutely necessitate the movement of something else; this is intolerable, so the premise is wrong, and the region is not nothing. This argument, which is sometimes derided, seems to me sound, deep, and important. I have fleshed out its details a little, but the core of it is in Descartes and in Spinoza (for references to the latter, see section 6).

Leibniz had a different device for explaining away the region. He contended that every so-called region, and indeed Space as a whole, is an ideal entity – a logical construct out of relations between bodies. This account of space implies, for example, that the crucial fact about the two pebbles on opposite sides of P is not that *there is something between them* but rather that *they are apart from one another*; so we have the language of relations between bodies and (regions of) space, but it is to be understood as a way of expressing facts about relations among bodies. It is not easy to carry through in detail this relational view of space, and it has had a better press than any specific version of it has earned (Earman 1989, Chapter 1). Still, it is a possibility, and it seems not to have occurred to either Descartes or Spinoza.

They, and especially Spinoza, went the other way: We should start with the region, and explain away the statement that there is a pebble in it. If there is (as we should ordinarily say) a pebble in region R, what makes this true is the fact that R is *pebbly*, where "pebbly" stands for a certain monadic property that a spatial region

can have. If the pebble moves (as we should ordinarily say), what makes this true is the fact that there is a continuous change in which regions are pebbly: The so-called movement of a pebble through space is like the so-called movement of a panic through a crowd. Nothing literally moves, but there is a change in which people are calm and which are agitated. And if the pebble were to be annihilated, what would really be happening is that a region ceased being pebbly and no adjoining region became pebbly; the going out of existence of a pebble is like the going out of existence of a blush or a panic or a freeze – nothing goes out of existence, but something alters.

6. SOME TEXTUAL EVIDENCE

That is my interpretation of Spinoza's doctrine that there is only one extended substance, and that finite bodies are modes of it. It gives the doctrine a chance of being true, and uses the technical terms "substance" and "mode" in their entire normal meanings. Furthermore, it makes sense as nothing else does of the principal passage in the *Ethics* where this matter is actually discussed – as distinct from the apparatus of official "demonstrations." I refer to the wonderful *Ethics* 1p15s, which includes this:

> Matter is everywhere the same, and parts are distinguished in it only insofar as we conceive matter to be qualitatively various, so that its parts are distinguished only modally, but not really. Water is divided and its parts separated from one another – *qua* water, but not *qua* corporeal substance. For *qua* substance it is neither separated nor divided. Again, water *qua* water comes into and goes out of existence, but *qua* substance it does neither.

The parts of matter are not separated really (that is, "thingwise," from the Latin "*res*," meaning "thing") but they are separated modally (that is, qualitywise). And the last sentence says that when water is annihilated no thing goes out of existence, but a region of the one substance becomes unwatery. This is all just what Spinoza should say if he has the metaphysic that I have attributed to him; I can find no other basis for it.

Spinoza connects this with Descartes through his reference in *Ethics* 1p15s to an earlier treatment that he has accorded to "vacuum." The treatment is in his *Descartes's "Principles of Philoso-*

phy" 2p2,3, where Descartes's argument that space cannot be *nothing* is explicitly invoked.

One dramatic bit of evidence that this really is Spinoza's position can be found in Letter 4. The passage consists of two sentences, of which the first is this: "Men are not created, only generated, and their bodies existed before, although formed differently." This sounds like a claim about the permanence of particles of matter: My body "existed before" in the sense that its constituent atoms existed in 1929 although they did not then make up a human body; and that could be said by someone who did not accept the metaphysic I have been expounding. But I think that Spinoza did mean to be stating that metaphysic, implying that Space is basic and my body is not: My body "existed before" in the sense that my body at this moment is a certain Bennettish region of space, and that region existed in 1929 although it was not then Bennettish. (It was not Bennettish three minutes ago, either. I have [to speak idiomatically] moved to this position two minutes ago, which is true because [to speak with metaphysical strictness] this region became Bennettish at that time.) That must be what Spinoza was getting at; otherwise, his next sentence is lunatic. He has just said that your beginning was not a true origination, and has implied that your ending will not be a true annihilation either. What, for him, would count as a true annihilation of an extended item? It would have to be the *annihilation of a region*. But if there is just one Euclidean space, that would have to involve *the annihilation of Space*: It does not make sense to suppose that a region might go out of existence leaving the rest of Space intact. Now look at the two sentences together: "Men are not created, only generated, and their bodies existed before, although formed differently. From this it follows, as I freely acknowledge, that if one part of matter were annihilated, the whole of extension would also vanish at the same time." On my interpretation of Spinoza, that second sentence is just right. I know of no other basis on which it makes any sense at all.

This metaphysical view, that the "occupants" of Space are really modes of Space which is the one extended substance, has been sympathetically entertained by Plato, Descartes, Newton, Locke, Quine, and others. In attributing it to Spinoza, I am putting him in worthy company.

7. SURROUNDING DETAILS

A couple of "matters arising" should be dealt with here, before we move to other topics.

(i) In the apparatus of lemmas etcetera that Spinoza inserts between *Ethics* 2p13 and 2p14, he presents an abstract physics, based on the view that the material world is made up of "simplest bodies." Many questions arise about these – questions that are not answered by Spinoza's characterization of them as items "that are distinguished from one another only by motion and rest, speed and slowness" (E 2p13a2"). For present purposes, however, what mainly matters is that none of the material presented between 2p13 and 2p14 belongs at the most basic level of Spinoza's metaphysic. That basic level leaves open the possibility that the qualitative variations that are found in Space, the one substance, might be such as not to support a physics of material particles at all; it might, for example, modally differentiate regions from one another in wavelike rather than thinglike patterns. Spinoza as a child of his times accepted the "corpuscularian hypothesis," and he had no good reason not to do so. I am a little sorry, though, that he was not inspired by his own metaphysic to see the possibility that the world at its next-to-basic level might have been unimaginably different from the world we think we have. The main point, however, is that the physics of simplest bodies does not compete with the substance monism; it belongs at a different, shallower level.

(ii) In addition to finite modes, says Spinoza, there are infinite modes. If modes are features or qualities of a substance, then the infinite modes of extension – described as Spinoza describes them – must be features of the extended world that it instantiates everywhere and always, features that it will continue to have no matter what alterations it undergoes. What could such features be? The only convincing answer to this that I know of is Curley's. He says that infinite modes are causal features of the world, and a statement attributing such a mode to the world would be a basic causal law (Curley 1969: 55–74).

That seems pretty clearly to be right, and Curley turns it to good effect in explaining 1p28,d. He interprets this passage as saying that each finite mode (thing or event) is caused by a previous finite mode,

occur?" There seems to be no way of answering this that will satisfy the demands of explanatory rationalism unless it can be said that the entire chain is absolutely necessary.

It would therefore not be surprising if it eventually turned out that Spinoza was an outright necessitarian, though I do not think it has yet been conclusively shown that he was. In addition to Garrett 1991, it might be worthwhile to read Bennett 1984, Chapter 5.

9. TIME

The concept of absolute necessity is involved in Spinoza's use of the term "eternal," and I make that my excuse for bringing in at this point the question of what Spinoza's view was about time. There has been disagreement and controversy about this too, but I contend that the situation is straightforward, untangled, and unambiguous.

(i) By "eternal" Spinoza means "absolutely necessary" (E 1d8), and when he uses that word to express this concept it is because he is thinking of the fact that whatever is necessarily true is always true. (ii) By "duration" Spinoza means the passage of time. (iii) By the Latin word "*tempus*" (usually translated as 'time') he means time thought of as cut or divided in some way: The concept of *tempus* is at work in any proposition that distinguishes some part of time from some other. Thus, it is used in all statements about measured periods of time, all uses of tenses, and all statements about what happened before or after what else. The phrase "an hour" involves *tempus* because it refers to a slice of time, a small amount of time cut out from the whole time-line; the phrase "what color the sky *was*" involves *tempus* because it distinguishes one time as past from another that is present; and "The rain ended before the snow began" involves *tempus*, quite apart from its past tense, because it distinguishes the time of the rain's ending from that of the snow's starting.

Spinoza says that duration "can be made definite by *tempus*" (E 5p23d), meaning that a statement involving the former concept can be made more specific by a use of the latter. For example, we can go from "The Milky Way lasts [tenseless] through time" to the more specific "The Milky Way lasts [tenseless] through at least a billion years." In short, to attribute duration to an item is just to say that it lasts through time, saying nothing about how long its time of exis-

tence is, whether past or future, or how related to other times; any such further details involves *tempus*.

Eternity, as I have implied, involves sempiternity; that is, it involves something's being the case at all times. Spinoza says of the existence of an eternal thing that "it cannot be limited by *tempus* or explained through duration" (E 5p23s). That it cannot be limited by *tempus* is something it shares with merely sempiternal things (if there are any), that is, things that exist at all times though not necessarily. In talking about the time of existence of a sempiternal thing, we do not need tenses, clocks, calendars, or relatings of times to other times. But sempiternity could be "explained through duration," for it is just unlimited duration, or duration through all times. Eternity cannot be so explained, as it involves not only sempiternity but also the additional concept of absolute necessity.

Some commentators have made heavy weather of all this. It is in fact simple and straightforward. The only tricky question has to do with which of these temporal concepts Spinoza is willing to apply to God or Nature. In his early *Metaphysical Thoughts* (published as an Appendix to *Descartes's "Principles of Philosophy"*), he said that God has no duration, which amounts to saying that no temporal concepts are applicable to the universe. His reasons for this were bad, and he seems to have changed his mind in the *Ethics*. He is of course committed to attributing duration to God given that he attributes eternity to God, because eternity is necessary sempiternity, which is a special case of duration.

What about *tempus*? In Letter 12 Spinoza speaks of it as "nothing but a mode of the imagination," which ought to mean that in a true fundamental account of the whole of reality the concept of *tempus* would not be used. In the *Ethics*, however, it is not clear that Spinoza meant to go so far. When he speaks of *tempus* he usually has in mind the measurement of time, and he did think that all our measures – of time and space and of things spatial and temporal – are superficial and "imaginative" and not part of the basic, objective story (see 1p15s). I do not think that he seriously meant to declare that none of the other uses of the concept of *tempus* would come into a fundamental description of the world.

If he did, then he must have held that the universe does not alter, and that apparent change is unreal. Some things he says could be taken in that way, especially "God, or all of God's attributes, are

immutable" (E 1p20c2), but such remarks do not force us to conclude that Spinoza thought change to be unreal, and I am reluctant to attribute to him anything so manifestly false.

10. THREE THESES, ESPECIALLY PARALLELISM

What happens to my body is systematically tied to states of my mind. This has to be explained, and Spinoza will not explain it causally. His explanation relies on a doctrine I shall call *parallelism*: "Mental items can be mapped onto bodily items in a way that preserves causal connectedness. That is, if M1 causes M2, and B1 corresponds to M1 and B2 to M2 under the mapping, then B1 causes B2. And conversely." As Spinoza says: "The order and connexion of ideas is the same as the order and connexion of things" (E 2p7). The mental correlate of any material item x is called "the idea of x." The most striking instance of this is that the mind of any human being is the "idea of" his or her body.

This thesis of mind–body parallelism is supposed to explain why minds seem to interact with bodies. It seems to us that a stab causes a pain which causes a cry; but really the stab causes the bodily counterpart of the pain, which causes the cry; and the "idea of" the stab causes the pain which causes the "idea of" the cry. There are two parallel causal chains; we are aware of bits of each, and we mentally assemble these into a single spurious chain – one that moves, impossibly, from extension to thought and back again.

It is wholly in character that Spinoza should see the correlations as complete rather than partial: There could not be a reason why some material items should have mental counterparts while others did not, and what cannot have a reason cannot be the case. Faced with the apparent fact that the mental world is partly harnessed to the world of matter, Spinoza is saying "It's not a harnessing and it's not partial."

As it stands, this is not much of an explanation of the facts as we find them! We know *what induces Spinoza to believe it*, but it will not explain the facts unless he also says *what makes it true*. He says that parallelism follows from *Ethics* 1a4, "The knowledge of an effect depends on, and involves, the knowledge of its cause," though I think help is also supposed to come from 2p3, "In God there is necessarily an idea both of his essence and of everything that neces-

sarily follows from his essence," together with *substance monism*, which says that there is only one substance, so that whatever it is that is extended is also whatever it is that thinks. This is discouraging. For one thing, the official argument for substance monism is weak (see section 3 above), and even with substance monism on board one cannot get, or even seem to get, parallelism out of *Ethics* 1a4 and 2p3. If one thinks that Spinoza was a genius, or even that he was a solidly competent philosopher, one must think that he could do better for parallelism than that. If he cannot, I give up: What remains is mere history, with not enough followable content to engage our philosophical interests. What is at stake here is the question of whether parallelism is sober metaphysics or a mere shot in the dark.

The clue to that is *mode identity*, that is, the thesis that if M is correlated with B under the parallelism, then M is B. This startling statement is first made in 2p7s, and we cannot get any further without finding out what Spinoza means by it.

II. THE MODE IDENTITY THESIS

To understand Spinoza's doctrine that a mode of extension and the idea of it "are one and the same thing," that is, that my body and my mind are one and the same thing, we have to take the term "mode" seriously. According to Spinoza my body is a mode – that is, an "affection" or state or quality – of the extended substance. This entails that the fact that

> There is a body which is . . . ,

with the blank filled by a complete account of the physical nature and history of my body, is really the fact that

> Space is F

for some complex value of F. The same applies *mutatis mutandis* for my mind: It is a mode of the thinking substance, the item that is to thought what Space is to extension, so that the fact that

> There is a mind which is . . . ,

with the blank filled by a complete account of the nature and history of my mind, is really the fact that