

Al-Fārābī

*DIALECTIC (KITĀB AL-JADAL)*<sup>1</sup>

Selections

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*Book I: The Domain of Dialectic*

*The Nature (māhīyah) of Dialectic*

/13 The art of dialectic is the art whereby human beings attain the power to compose a syllogism from widely-accepted (*mashhūrah*) premises, for the destruction of a position (*waḍʿ*), whose subject is universal, and which has been granted by questioning from the respondent, who has the responsibility to uphold [the position], whichever one of the two parts of a contradiction it happens to be, and to preserve every position whose universal subject a questioner happens to have the responsibility to destroy, whichever part of a contradiction it happens to be.

And when Aristotle defines this art, he construes it as a method (*tarīq*), saying that it is a method by which we are prepared to construct a syllogism from widely-accepted premises concerning any question which might be intended, and not to bring in anything opposed (*muḍadd*) when we respond to a question. And “opposed” is used in place of “contrary” (*al-muqābal*), and he indicated what is contradictory (*al-munāqaḍ*) by this. And by our saying that he should not bring in anything contradictory we mean that we should not grant anything from which the contradictory of the position, which we are responsible for upholding, follows. And his saying “concerning any question which might be intended,” means concerning any position which has been granted by questioning, by which he means to say either of the parts of the contradiction which the questioner happens to have been granted by the respondent. And method, procedure (*al-madhhab*), and path (*al-sabīl*) were all considered by the ancients as habitual dispositions by which human beings devote themselves to the construction /14 [of syllogisms] for some end, and as the genus which comprises all five syllogistic arts.

And the activity of this art, namely dialect (*al-jadal*), is debate (*al-majādah*), that is, a discussion using widely-accepted statements (*mukhāṭabah bi-aqāwīl mashhūrah*) by which a human being, if he is a questioner, obtains the destruction of whichever one of the parts of the contradiction it happens that he obtains through the questioning of the respondent who is responsible for upholding it; and by which, if he is a respondent, he seeks to uphold whichever one of the parts of the contradiction the questioner happens to have the responsibility to destroy. For the purpose (*gharaḍ*) of the questioner is for him to destroy what the respondent has the responsibility to uphold, and this is victory for the questioner. And Aristotle thinks that the role of the dialectical [art] is primarily the destruction of statements, although destruction only comes about by the creation of the opposite of that whose destruction is sought. However, in its primary intention (*ʿalā al-qaṣd al-awwal*), its role is destruction. As for positive proof,<sup>2</sup> this is its role only in its secondary intention. And this discussion only takes place between the questioner and the

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<sup>1</sup> Based on the edition of *Kitāb al-jadal*, by R. Al-ʿAjam. Vol. 3 of *Al-manṭiq ʿinda al-Fārābī* (Beirut: Dar el-Mashreq, 1986).

<sup>2</sup> *al-ithbāt*, literally, “establishing.”

respondent over a position with a universal subject which the two of them lay down. And it is not necessary in this discussion for there to be more than two [participants], for its status is not like the status of rhetorical discussion. For in the latter there is need of a judge along with these [two discussants.] Rather, in this [art], one questioner and one respondent suffices.

And of the two, the questioner is responsible for refuting [the position] by producing a syllogism from widely-accepted premises which he knows will conclude to the contrary of [the position]. Whereas the respondent has the responsibility to uphold [the position] by not granting to the questioner anything from which the contradictory [of the position] follows, even if the questioner, for his part, brings in something by which he seeks to destroy this position, which he has accepted through a statement which is opposed to this thing. This is because the questioner's procedure is first to cause the respondent to grant the position through questioning. But when the position has come to be postulated, his activities will be successful after this if he also causes the respondent to grant whatever premises he thinks will be useful in destroying this position. But when in his view [other] premises have arisen from the premises which the respondent has granted, and if he composes them, the contradictory of the position follows from them, then he brings them together and concludes the contradictory from them, addressing the respondent with them by way of assertion (*'alā tarīq al-akhbār*), not by way of questioning. But when he has completed this for the respondent, then he has brought about his refutation. For the refutation is the syllogism from which the questioner concludes the contradictory of what the respondent is responsible for upholding, either from a belief (*ra'y*) or from a position (*wad'*). But it does not belong to the questioner to construct a refutation of the dialectical respondent from premises which /15 the respondent has not granted.

And when the respondent has set down the position which he has chosen for himself, then his procedure after this is to guard himself against granting to the questioner the premises of which the questioner can make use in destroying he position. Rather, it is only necessary for him, in every questioning, to seek, in everything which he grants of what is a part of the contradiction, the part which cannot be used by the questioner in causing the respondent to contradict himself. But if the respondent has granted something among the premises which he supposed the questioner could not make use of, then the questioner combines with it some of the premises which he has granted, as if [the respondent himself] had granted them and composed them, and addresses him with them in such a way that they conclude the contradictory of the position, then it is up to the respondent to examine the figure (*al-shakl*) of the statement which the questioner has composed, [to see] whether it is a conclusive figure or not. And as for whether it is up to him to consider each of the premises of this statement, it may be supposed that it is not up to him, and that he does not challenge the knowledge of any one of the premises, since he had granted each one of them earlier. And it is only up to him to consider and refuse what the questioner addresses to him concerning the things he has not granted. And what he had not granted in what preceded was the figure of the statement which the questioner had composed for him. If it is non-syllogistic, then the refutation of the respondent does not follow from it, whereas if it is syllogistic, then the position of the respondent is destroyed, and the refutation does follow from it. But sometimes what the respondent has granted among the premises are premises which, if they are taken in the conditions under which the respondent granted them, they are neither true nor widely-accepted in reality, or they are in a condition in which a syllogism which contradicts the position cannot be constructed from them. So the questioner supposes that they are sound and that a syllogism can be composed from them, and so he assembles them and addresses them to the respondent, endeavoring to make the contrary of the position of the respondent follow from them; or the questioner distorts what the respondent has granted, but after distorting it, the questioner has himself a syllogism by which the contradiction of the respondent occurs. But under these circumstances, it is up to the respondent to consider these premises, and if they are in accordance

with what he has granted, but only inasmuch as the questioner cannot make use of them, nor compose from them a true syllogism, but the questioner has supposed that he has composed a syllogism from them for the respondent, then it is incumbent upon the respondent that the questioner be informed of what will cause this supposition to be abandoned by him, by [informing him] of the conditions under which he had granted [the premises], under which the questioner cannot make use of them, nor compose from them the syllogism which the questioner has supposed that he could compose. And if the questioner has distorted what the respondent had granted, then it is incumbent upon the respondent to show this. /16 And sometimes the questioner has not caused the premises to be granted by questioning from any particular premise, but rather, after he has caused the position to be granted through questioning, he has pursued premises which he thinks will destroy the position, and collected them and addressed them, and their conclusion, [to the respondent], either by way of assertion, or by the method of questioning. And it is only permitted to do this concerning what it is supposed that the respondent granted when it was addressed to him. ...

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### *The Propositions of Dialectic*

Dialectical premises are universal and widely-accepted. For it is clear that their subjects are universal, because those whose subjects are particulars are gradually effaced over the course of time or through their absence, for one is not aware of the quality of their condition after they are absent from the senses. Moreover, it does not always happen that the sensibles are one and the same in number for everyone, whereas premises widely-accepted by everyone require that what is understood through them be essentially a single meaning numerically for all. And these premises and beliefs<sup>3</sup> are received, and used without examination and investigation, and without the knowledge of whether they are in conformity with existent things or not. Rather, they are received insofar as they are beliefs alone, without knowing anything more about them than that all people think that they are such or not such, just like what happens when a reliable authority reports what he believes of a thing, and we accept and treat the thing in the way warranted by the state that was reported by him, without our having witnessed this state itself. And just as we accept the beliefs of group whose opinion (*al-zann*) we esteem, and trust their beliefs with the utmost confidence, without our knowing this in the way in which they have recounted that they known it. And whenever things are reported to us, the greater the number of those who hold this belief, the more perfect is our confidence in them, and the stronger the acquiescence of our souls (*sukūn al-anfus-nā*) to what they reported of their many observations and beliefs, and our acceptance of them. And the acquiescence of our souls, our assent, and our acceptance of them increases in proportion to the increase in number of those reporting from their own knowledge what they witnessed of things and what beliefs they were convinced of. Thus the outcome of our confidence in the belief, insofar as it is a belief, is that it is the belief of all people.

Just as there are things among the sensibles which we sense just as others sense them, and things for which we depend upon what other people have sensed of them, and we are content with their report, without having witnessed and sensed this ourselves, and we use these things in the same way as we use what we have sensed and witnessed ourselves, so too this resembles the fact that there are among the intelligibles some things which we assent to insofar as we know them ourselves, as well as things concerning which we depend upon what other people know and believe of them, and /18 we use them in the same way as we would use things which we ourselves know. And we treat them as if their condition were as it has been reported to us to be believed and known, without our knowing ourselves anything more about it than this. And the

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<sup>3</sup> *ārā'*.

belief upon which we depend in the case of the intelligibles is sometimes the belief of one person only, or of a group only, and then it is a received belief (*al-ra'y al-maqbūl*). And sometimes it is the belief of all people, and then it is a widely-accepted belief (*al-ra'y al-mashhūr*). And in general, the widely-accepted premises, which are the principles of dialectic, are those whose subject is a universal, abstracted meaning, and they are universals of which one has confidence, and of which it has been accepted and believed that they are of such a kind, and they are used without anything more about them being known.

And certain premises, which are the principles of the speculative sciences, are universal premises corresponding to existent things, which we have accepted, and to which we assent. And each one of them is used in accordance with one's own certitude that it corresponds to the things, without any of them depending upon the testimony of someone other than oneself, and without their relying upon what someone else believes of it, regardless of whether or not someone else's belief about it is like one's own. For whenever it happens that everyone holds the same belief about something, this does not testify to the soundness of this belief; rather, [it testifies] to the perspicacity [*baṣā'ir*] of their souls. As for widely-accepted [premises], each of us only accepts them because the belief of everyone else is a single belief, and they attest together that it is such or not such. And if it happens in this belief, or in many of them, that they correspond to the way things are, and it is found to be certain by our own knowledge that they are this way, then we do not accept nor use them in the art of dialectic insofar as we know them (*'alimnā*), and are certain of their correspondence with the things. And their truth or renown only necessitates that every proposition among them in our souls be of a certain quality and quantity, and nothing more. Then we will judge that their quantity and quality outside the soul is the same as the quantity and quality which was found in the soul without their renown being what yields this and requires it in itself, but primarily their condition in the soul. And as for what is known and certain, the knowledge and the certitude of any proposition yields and requires two things simultaneously and: **19** namely, that it be composed in the soul in a certain quantity and quantity, and that its existence outside the soul be of the very same quantity and quality. And no proposition is composed in the soul unless in the quantity and quality that it has outside the soul. For the object of knowledge is true insofar as it known necessarily, and essentially rather than accidentally, whereas what is true in the widely-accepted, insofar as it is widely-accepted, is true accidentally, not essentially.

And the premises which are used as primaries are the received, the widely-accepted, the sensible, and the certain, except that at first the widely-accepted are not distinguished for us from the certain premises, but rather, we use them together in the same way. Perhaps our first criterion<sup>4</sup> for the soundness of the premises and beliefs is that we find them to be widely-accepted, and beliefs that are agreed upon. And this is such that the first certain premises are those whose individual subjects are sensibles. But insofar as they are premises, they are primary, universal, and widely-accepted. So for this reason it is necessary that we make the widely-accepted [propositions] principles, and the certain [propositions] to be shared by everyone in general. And the types of premises which are used as principles arise, and some of them are distinguished from others from the outset, and there are three of them: sensibles, received [premises] (*maqbulāt*) and widely-accepted premises. And people always give priority in nobility and leadership to the sensibles and the widely-accepted over the received. And they think that the nature of the received is to be put to the test and verified by means of the sensibles and the widely-accepted, whereas they think that the widely-accepted are more proper to human beings than the sensibles, since sensation is common to humans and the other animals, whereas [they think that] these

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<sup>4</sup> *sibār-nā*, literally, “our probe”; the translation “critère” is suggested by Vajda, “La théorie de la connaissance chez Saadia,” *Revue des études juives* 126 (1967): 381 n. 2.

[premises] belong to the intellect alone, and are intelligibles, and that the argument which is taken from what is widely-accepted is the argument of intellects. And the sensibles are not used in dialectic, because their subjects are particular, except in induction, [where they are used] in order to verify the universal premises whose individual subjects are sensibles. But they are not sensible premises, but rather, they are included under the widely-accepted.

And the widely-accepted are premises which, upon being known and heard, bit by bit and gradually all nations are first educated, and their youth raised and their young people brought up, both insofar as they do so consciously, and unawares. And through them diverse nations come together despite the distance between their inhabitants and the diversity of their customs (*khulq*) and their languages. And through them the friendship of some nations with others is fostered, and from them actions that are common to them proceed, /20 and the approval of some of them by others. For the widely-accepted beliefs include those which are chosen and esteemed by all, and those that are repudiated and rejected by all, the latter being repugnant beliefs. And these two [types of beliefs] are opposed to one another in the sphere of what is widely-accepted, just as the true and the false are opposed to each other in the sphere of scientific propositions. For the true in the realm of the scientific corresponds to the chosen and the esteemed (*al-maḥmūd*) in the realm of the dialectical. And the false in the realm of the scientific corresponds to the repugnant in the realm of the dialectical.

And these widely-accepted beliefs arise for human beings in all genera of things concerning which one speculates, and whose knowledge one acquires. And their genera are three: the speculative, the practical, and the logical. The speculative are universal propositions, none of whose individuals a human being can produce through his will (*bi-irādati-hi*). And the practical are universals, all of whose individuals can be produced through his will. And the logical are those whose nature is such that they are used as instruments, in that by means of them one is guarded against error in the intelligibles, and through them the truth and falsity of reports and statements can be put to the test.

And widely-accepted premises include widely-accepted premises concerned with speculative things, widely-accepted premises concerned with practical things, and widely-accepted premises concerned with logical things. And whenever the individuals [included under] the subjects of the premises whose subject are universals cannot exist except through the human will, these premises are practical; whereas whenever there is in the individuals included under their subjects anything which does not exist through human will, these premises are numbered among the speculative premises. And if some aspect of their individuals exists through human will, but everyone is only interested in some types of them, then they are only used among the widely-accepted to the extent that they are widely-accepted propositions, that is, to the extent that people are habituated and accustomed to them. And each of them is used as widely-accepted, insofar as it is necessary, in one of two ways: either they are used just as they are, or their potency, their parts, and the acts proceeding from them, are used.

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### Dialectic and the Other Sciences

And the philosophical, that is, the certain, sciences, always use, in the proof of all of their objects of investigation, the scientific syllogisms which we mentioned. And the mixed method, which we mentioned, is that which was the method of philosophy in the past, until the three methods were distinguished from each other, and divided into the scientific, the dialectical, and the sophistical. And the scientific methods were attained and became the scientific art, which is the intended end (*al-ghāyah al-maṣūdah*). And the dialectical art became a [method of] training (*irtiyādan*) and introduction to [the scientific art], and an instrument and servant of the scientific art. And the sophistical remained imitative (*muḥākīyah*) of the dialectical and a semblance of it, and supposed [itself] to be dialectic. Sometimes [it was even] imagined to be philosophy. And the subjects of the three arts are one, and their objects of investigation are one and the same thing essentially, but [the arts] are distinguished by their [distinct] ultimate ends, and by their principles.

The ultimate end of philosophy is ultimate happiness (*al-sa'ādah al-quṣwā*), whereas the ultimate end of dialectic is for human beings to acquire the power to investigate and to introduce their minds to philosophy and to the number of its principles and its objects of investigation. /28 And in general, the end of the art of dialectic is to support the art of philosophy and to serve it. And the ultimate end of sophistry is to make knowledge, wisdom, and the search for ultimate happiness be imagined of a person. But the innermost thought (*al-ḍamīr*), the secret desire, and the purpose in the soul of the person who causes this to be imagined is to attain for himself wealth, honour, praise, or some other one of the false goods.<sup>5</sup>

And [the three arts] also differ in their principles. For the principles of dialectic are the universal, widely-accepted premises which we have defined. And the principles of sophistry are universal premises misrepresenting the thing, which cause it to be imagined on the surface of things that they are widely-accepted, without this being the case in reality. And the universal, widely-accepted premises which are partially false, their renown hides their false part, as we have said, so that it is difficult for this reason to extract their true part. And it is characteristic of the certain, universal, primary premises that they are all also widely-accepted, and their are accepted at first insofar as they are widely accepted, without being by gauged any other criteria,<sup>6</sup> nor are the conditions which we mentioned in the *Book on Demonstration* imposed upon them. And it is for this reason that they are accepted in dialectic, and in those arts in which there is no use of any other criteria other than being widely-accepted, although these things are certain truths accidentally. And since these things are of this kind, the syllogisms arising from them yield opinions (*al-ẓanūn*) for us in their conclusions, although they are true opinions, though accidentally, not essentially, true. And the syllogisms arising from universal, widely-accepted premises which are partially false, and whose renown conceals their falsity clearly yield false opinions in their conclusions. So it is clear from what we have said which principles are false opinions, and which principles are true opinion. As for the premises which appear to be widely-accepted, but which are neither widely-accepted nor certain, but disguised so that it is supposed that they are widely-accepted, they are disguised by means of other correct things which make them [seem] widely-accepted. And these things are those which were enumerated in the

<sup>5</sup> *al-khayrāt al-jāhilīyah*, literally, “ignorant goods.”

<sup>6</sup> *ghayr anna tusbaru bi-shay' ākhar*

*Sophistical Refutations.* And at first the falsehood in the principles of dialectics is concealed, and it does not become evident until after much investigation over a long time, because their renown and the testimony of everyone is that they are so. And [the falsehood] is also concealed in the principles of the sophistical [art], not because of their renown, but rather, because of the things which veil their repugnance and the falsity of their renown, so that it is made imagined /29 of things that are not widely-accepted, that they are widely-accepted, and of what is widely accepted as a falsehood, and rejected by all, it is made to be imagined that it is widely-accepted as a truth and preferred by all. And [sophistry] makes what is preferred and esteemed imagined to be repudiated and rejected. And since falsehood is hidden in the principles of dialectic because of something which embraces the totality [of the belief], this being its repute and the testimony of all to it[s truth], whereas falsehood is not hidden in the principles of sophistry because of something which embraces the totality [of the belief], nor because of something which is related to [the testimony] of all people, the falsehood in the principles of sophistry comes to be recognized quickly, with little reflection, whereas the falsehood in the principles of dialectic only comes to be recognized after much reflection; for everything which is found in dialectic is found in sophistry. And this is because everything which is in dialectic authentically (*bi-al-ḥaqīqah*) is in sophistry through dissimulation. And for this reason there are sophistical questions and answers just as there are dialectical questions and answers. And there is a sophistical method of raising doubts, just as there is a dialectical one, and sophistical refutation and opposition, just like dialectical refutation and opposition. But all of these are in dialectic authentically (*bi-al-ḥaqīqah*), whereas they are in sophistry through dissimulation, since dialectic uses valid syllogisms (*qiyāsan fī al-ḥaqīqah*) and premises that are widely-accepted in reality, whereas sophistical premises may be supposed to be widely-accepted, but are not in fact so, and likewise its syllogisms are sometimes supposed to be syllogisms when they are not. And dialectic has nothing supposed in it, but rather, valid syllogisms and premises that are truly widely-accepted.

### *The Utility and Importance of Dialectic*

Dialectic is useful for five things:

(1) One of them is that human beings train and prepare their minds for the certain sciences. And this is because it habituates him to investigation and makes him aware of the nature (*kayf*) of investigation of how it is necessary to order things and arrange arguments (*al-aqāwīl*) in the investigation so that he attacks the problem and his mind quickly acquires knowledge of the middle term. It also makes him capable of quickly assenting to the syllogism concerning any problem which has been posed, and bestows upon him /30 the power to oppose every opinion which he hears or which is spoken to him, and quickly to come to know the topics of opposition in every statement which has been posited. And it helps him not to be persuaded at first glance (*an lā yuq'ina bi-bādi' al-ra'y*), by what the first idea [that occurs to him] (*al-khāṭir al-awwal*), antecedent thought (*al-sāniḥ al-sābiq*), and apparent theory (*ẓāhir al-naẓar*) impose upon him,<sup>7</sup> without careful investigation and searching (*al-istiḡṣā' wa-al-tanqīb*). And it makes him to be in a state of not being inclined to an opinion and not being enchanted by any argument at all, and not making use of a belief's esteem, nor of affection nor partisanship (*lā al-'aṣbīyah*) regarding either himself or anyone else, and not acquiescing to his own belief nor to someone else's (*lā yaskunu li-ra'y*)<sup>8</sup>, nor being persuaded by it, but rather, beliefs are produced in him, insofar as they are beliefs, in a form whose way is for him to be skeptical that perhaps they are false or erroneous.

<sup>7</sup> These are all terms associated with rhetorical assent in Islamic logic.

<sup>8</sup> *Sukūn al-naḥs* is a term used by the Mu'tazilah to describe knowledge; Fārābī disparagingly uses it as a term to designate rhetorical assent.

And this induces him to test the received beliefs (*al-ārā' al-maqbūlah*)<sup>9</sup> which he first encounters, and in and to which he has been raised and habituated, so that he [in turn] sometimes induces many people at many times to be skeptical of the sensibles and to put them to the test, as happened in the case of Parmenides and Zeno, in that they both said that motion is non-existent, and that the many (*al-kathrah*) is non-existent, and that being (*al-mawjūd*) is one. And they thought that they were following what widely-accepted [beliefs], which were intelligible to all and necessary, and that there was doubt concerning the sensible, since it is the intelligibles which are more proper to human beings than the sensibles.

But while this faculty is in a human being, without his mind having being prepared by such an introduction, he would not be able to reach the truth, nor to reach philosophical beliefs. This is because that which a human being first give rise to and comes to know are widely-accepted beliefs, which are chosen at first glance by all people, and received and sensibly-perceptible beliefs. And received beliefs are those into which a human being has no insight (*bāṣirah*) of his own, for in what he has received of them he relies only upon the insight of someone else of whom he holds a high opinion. And it is not possible for a scientific belief to arise in him from this belief, nor for him to have insight of his own. For an insight of his own only comes to belong to him by its being attained for him in a syllogism composed from premises which he has known from the outset. And an insight of his own comes about in a human being from such things, and not from an syllogism or proof (*dalīl*) at all. And these [received beliefs] are primarily premises which are taken on account of the first, widespread belief (*bi-bādi' al-ra'y al-shā'i*), and they are uninvestigated at first glance. And for this reason there is no security against there being some falsehood in them, of which a human being is unaware. So for this reason it is also necessary to put them to the test and to investigate them. But it is only possible to put them to the test and to investigate them except through opposition; and this [in turn] is not possible except through the ability to know /31 the topics of opposition. And this is only possible through the art of dialectic. For the art of dialectic is that which secures this power for the human being. Therefore it is not possible for a human being to arrive at the truth (*al-ḥaqq*) or at philosophy (*al-falsafah*) unless through the dialectical faculty. And for this reason we find that Aristotle also prefaced the beginning of his discussions of most of the things which he sought to explain in the physical, theological, and political sciences with dialectical statements and the dialectical investigation of the matter. And for this reason in the *Parmenides*, Plato said, in what he related of Parmenides, that the latter would enjoin the young Socrates, who was debating with him. So he said to him, “While you are still young, practice with the things that are, in the eyes of the general public (*al-āmmah*), drivel, redundancies, and so much talk (*kathīr kalām*), for otherwise the truth will slip away from you.” And by this he meant, “Practice dialectic and dialectical arguments.” And the proof (*al-dalīl*) that he means dialectical arguments is that when he enjoins him and goads him to do this, he afterwards begins to engage in dialectical arguments with him, by way of raising doubts (*al-tashkīk*), discussing them with him (*bāḥith-hu*), and investigating the One and commencing to establish [its existence], and then to destroy it, in the manner of taking turns which belongs to the art of dialectic. And this is one use for dialectic in philosophy.

(2) And another of its uses is that one is introduced to the certain sciences, enumerating all of their subjects and making them ready for the sciences. For it makes ready for the sciences all of the widely-accepted premises, which are those which, in their entirety, produce the true, primary, universal premises which are the principles of certain science. And all of the problems for investigation (*al-maṭlūbāt*), i.e. the propositions which are external to what widely-accepted, and whose establishment and destruction dialectical syllogisms effect, are also made ready for it. And

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<sup>9</sup> “Received beliefs” again belong to the realm of rhetoric, referring to the reception of opinion on the authority of a limited group of people or a single person.



all of the dialectical syllogisms which are about these problems are prepared for them, for all [dialectical syllogisms] produce an actual habit for these things, and give human beings the power to produce and supply them at any time at all. And when all of these things have arisen, afterwards all that remains is to examine and probe them by means of the demonstrative and scientific canons and conditions, the method for which has been mentioned and catalogued in the *Book of Demonstration*. For whatever accords with the conditions /32 of the primary, certain, universal intelligibles among the widely-accepted [premises] produces the principles of the certain sciences. And whatever ones of the widely-accepted [premises] accord with the conditions of problems in the sciences, these widely-accepted [premises], which are principles in dialectic, become objects of investigation in the certain sciences. And in this way we consider the problems which the art of dialectic bestows, and test them according to the conditions and canons of demonstrative problems. For whatever ones among these [dialectical problems] accord with these conditions also become problems in the sciences. And according to this model, we put to the test the syllogisms which the art of dialectic provides. And whatever ones among these syllogisms accord with the conditions of demonstration produce demonstrative [syllogisms]. And in general, everything which dialectic bestows and prepares, if it accords with scientific canons and conditions, it becomes something common to both arts together. And whatever does not accord in anything at all with the conditions of scientific matters remains proper to the art of dialectic, and is used properly only for training. This, then, is the second use for dialectic.

(3) And among [its uses] is that the certain sciences are of two types: one type is that whose subjects are things that lead the human being who is speculating about them and investigating them to what is correct, because of their facility for the mind, so he quickly abstracts it in his soul from the accidents which are attached to it, because such things are in themselves easy for human beings to imagine and conceive of in abstraction from matter, without them requiring a mind of great ability in their case—these are the mathematical sciences; another type is that whose subjects inhibit some portion of correctness in them, owing to the difficulty of the mind abstracting them from matter. Rather, they are not abstracted, and are always only understood along with and in their matter. So for this reason there is no security, whenever there are many accidents in their matter, against these accidents being attached to them in our understanding. Thus these things deceive those speculating about them concerning the truth (*al-ḥaqq*) of these things, and cause those speculating about them to imagine contrary states in one thing, thus causing them to fall into contradictory opinions, and to contend with each other over their beliefs about it, so that it perplexes them. For if the intentions in the soul are not abstracted from matter and from the accidents which attach to it, then their universality is not pure in the primary premises from the outset. For whenever some of the intelligible objects are not completely distinguished /33 from others in the soul, so that each of them is not purely abstracted in the mind through the nature which is proper to it, then its subject is not perfectly abstracted as a universal subject for its predicate, but rather, the locus of some condition or conditions remains in it. So at first, as much as is humanly possible, one makes use of the abstraction, until these opposing characteristics are removed and abstracted from it. Moreover, whenever matter or one of the accidents is attached to the thing, so that it is difficult to conceptualize it, or impossible to do so without matter and accidents, then it is possible that something will be predicated of this thing as a predicate, insofar as the thing is in its own nature a singular. And if it is understood insofar as it is characterized by this matter, some predicate of it will be opposed to another predicate of it. And if this thing, insofar as it is a singular, is not distinguished by us from itself, insofar as it is conjoined to matter, and we understand it under one of these states (*bi-hāl wāḥid*), then two opposed predicates will attach to this one thing. And likewise, if what is conjoined to it is some accident in matter, its essence (*dhāt-hā*) as abstract will not be distinguished by us from its essence insofar as it is conjoined to this accident, and two opposed predicates will be attached to it because of these two states. And likewise, if two accidents are attached to it, and to each of the

two accidents a predicate is attached which is opposed to the predicate which attaches to the other, and we understand this thing insofar as it is characterized by one of these two accidents, but through the state by which we understand it as characterized by the other accident, which is a state which is common to an embraces both accidents, and the two accidents comprise a collection in which each of them are not distinguished by us from its associate, then two opposed predicates will be attached to this thing. For if the widely-accepted premises, which are in our view widely-accepted in these sciences, known from the beginning and at first glance, are used by us as major premises and attach minor premises to them, they inevitably lead us to contradictory and opposed conclusions.

And these sciences are those whose status is that of physical science, theology, and political science. And there is proof of this as well in the fact that those of the mathematical sciences which are closest to physical science, such as the sciences of perspectives, music, and mechanics, because they are closer to physical science than arithmetic and geometry, each of them has, in itself or in its principles, a measure of difficulty and variation in proportion to its proximity to physical science. But since arithmetic is remote from physical science in its ultimate end, there is nothing difficult in it /34 at all, and for this reason, no variation occurs in it at all. There is a slight difficulty in the principles of geometry, in proportion to its descent from the level of number and its remoteness from matter. Then the science of astronomy is much more difficult than geometry, and the variations in it greater. Then the science of perspectives, and then the sciences of music and mechanics, especially in their principles. And the cause for all of this is as we have stated. So it is therefore not possible for one to know the truth about these three sciences, nor for a dialectical raising of doubts to precede speculation concerning them by means of scientific methods. And whenever knowledge without the raising of doubts is used in them from the beginning, then either they cannot be apprehended at all, or, if anything of them is apprehended at all, it will be a very defective apprehension. And this is because most of what is in these sciences is either things attached to matter, or attached to accidents, or whose knowledge is reached through things whose condition is of this sort. And for this reason contradictory things come to belong to them simultaneously. And since dialectic is that which bestows both contradictories in the case of every existent, and that by which one has the ability [to compose] two opposed syllogisms, whereas demonstration and the demonstrative art cannot yield two contradictory syllogisms, nor prove to the existence of two contradictory states of affairs in one thing, the investigation of these things is not possible through the demonstrative art. Moreover, because the demonstrative art only dissolves doubt by bestowing the respects in which contrary predicates are attached to a single thing, in the case of the majority of them, so that the contradiction of that which was supposed to be contradictory ceases, and [because] it is not possible for the demonstrative art to bestow the ways by which the contradiction stemming from the statements ceases, before [recognition] of the contradiction which is in us has arisen, it follows that the art of dialectic, which yields the contradictories, must necessarily precede the demonstrative art, which bestows the ways which cause doubt and perplexity to cease. But for this reason it sometimes happens that we find Aristotle raising dialectical doubts on some matter in these sciences which he discusses in his books, before he seeks to demonstrate it. Then he completes this with demonstrations. And for this reason Plato set up dialectic after mathematics and before the three remaining sciences in the education of the kings of the virtuous city.

(4) And among [its uses] is that since the principles of the certain sciences are universals, they are intellected from the beginning. /35 But many or most of them are inactive and unused from the beginning, owing to the preoccupation of human beings, at the outset of their lives, with those things whose nature is for them to be raised on them in their childhood, until they reach the age of twenty-one. And the rest of the arts are those whose way is for these intelligibles not to be used in them, since they are not principles of these things nor useful in them, for every intelligible is not a

principle for every art. And a human being may use many of them in what he is concerned with among them, not in that he uses them insofar as they are universal, but rather, he uses their force and their particulars, and has no need of using them as universals for an end which is possible among the general public. And he contents himself with their force, since it is sufficient for these arts. And the things with which he is concerned also remain universals, as patterns of these primary premises, [though] inactively. So it is necessary, in the like of these principles, that the one appearing to the public understand their universal meanings. But it is not impossible that he would not recognize their universality, since he does not conceptualize them as universals, and so it is necessary, in making them understood, for him to make an inductive survey of those of their particulars which it is the custom of the other practitioners of the art to use, so that the universals of the powers which it is his custom to use might be conceptualized in his soul. And induction concerning analogous things is proper to dialectic, whether it bestows their definitions or their widely-accepted descriptions, so that when their meanings are understood, certitude about them comes to be, in his eyes, like the certitude concerning their particulars. Moreover, there are many things with which one only begins to be acquainted from the first knowledge which occurs to human beings at first glance, and in the eyes of all people. But whenever anyone reflects upon them, he finds something that is opposed to this knowledge, and the opposition which he finds is what arouses him [seek] knowledge of anything which he had neglected in this state of affairs. Then he reflects upon this, and finds as well something else opposed to the additional knowledge that the first opposition had yielded. So the second opposition calls his attention to the knowledge of something which he had neglected. And this continues in this way until he arrives, through this arrangement, at everything which he needs to know of the nature of this thing. And it is not possible for him to proceed in this arrangement by means of any art other than the art of dialectic. Therefore, in most things it is the art of dialectic which bestows the principles of speculation in this way. Moreover, because /36 demonstrations are of two types, one of them absolute, the other relative, the absolute being the one which bestows absolute certitude through its essence, whereas the relative is that which is a demonstration in relation to some person or group, there cannot be demonstrations from the principles of the certain sciences which are relative to some group or individual person, if this person or group alone is not acquainted with these principles, if there are in this case things which cause error for him or them alone. And demonstrations which are relative to some individual are only composed from widely-accepted premises, belief in which no one is deprived of. And these demonstrations are taken from the art of dialectic.

So in this way dialectic may also be useful in the principles of the certain sciences, for it is not impossible for there to be someone among the people who causes doubt concerning evident things that are clear in themselves, in the way that we find a group of people who do not know that contraries cannot both be true simultaneously, and just as we find that a group of people may be ignorant of the fact that a thing which moves is generated, whereas another group is aware of the things that move, but deny the motion. And the demonstrations by which motion and the thing which moves are established for them, and that contradictories cannot both be true simultaneously, are demonstrations relative to these people, and can only [be made] from widely-accepted premises. And for this reason Aristotle began by saying, in the beginning of the *Physics*, when he wanted to begin to discuss Parmenides, “We are speaking dialectically,” even though there was some philosophy in the discussions [of the Parmenideans].

And one of [the ways in which dialectic may be useful] is that since we are political by nature, it is for this reason necessary for us to be on friendly terms with the masses, and liked by them, and that we perform some useful function for them which renders their conditions good. In the same way it is necessary for them to share with us the goods which it has been entrusted to them to establish, by our making them see the truth concerning the beliefs which they hold in their religions. For if they share with us in the truth /37 it is possible for them to share with the

philosophers in the happiness of philosophy, to the extent of their ability, and for us to remove them from what we believe is incorrect among their statements, beliefs, and customs. And it is not possible to do this with them by means of certain demonstrations, owing to the remoteness of their comprehension of them, their strangeness to them, and their difficulty for them. Rather, it is only possible to do so by means of knowledge that is shared between them and us. And this is such that we address them by means of widely-accepted statements, in which what is known by them is something received from what is evident to them. So from this variety of philosophical instruction there arises the fourth [use of dialectic], which is known as external, exoteric philosophy. And Aristotle mentioned in many of his books that he had [other] books whose activity was that of exoteric philosophy, in which he sought to instruct the masses by means of widely-accepted beliefs. And the capacity for this type of philosophy only arises from the art of dialectic. And through this the philosopher shares with the masses, and comes to be safe, so that his practice is found to be neither burdensome nor detestable. For it is the habit of the masses to find what is foreign to them burdensome, and to detest what is beyond their comprehension.

(5) And one of [its uses] is that it is not possible for one of the practitioners of the scientific arts to resist the sophistical arguments which he censures by the power which he has acquired from his art, nor to oppose them with his art nor to dissolve the sophistical doubts which are intended to cause the master of this art to be perplexed about it, and to cut himself off with it, declare it false, and belittle its function. Rather, it is only possible for the master of dialectic alone to face sophistical arguments. Therefore, the art of dialectic is also that through which the preservation of philosophy against the sophists, and its resistance of them, [is accomplished.] And these are the uses of dialectic within philosophy.

Thus dialectic is a certain training which belongs to human beings on account of their sharing something with others, by which they become accustomed to the certain sciences. And it is also an introduction to speculative existents, in order to instruct in the certain sciences and serve them by bestowing their principles in the ways that were explained. And it also serves them by bestowing to them /38 arguments by which the instruction of the masses in what is useful for them from among the beliefs which have been discovered in the certain sciences is facilitated. And they are led away from things about which we do not think their statement is correct, and away from those beliefs which are harmful to them. And it also serves philosophy by protecting it from the sophists.