

**KNOWLEDGE ('ILM) AND CERTITUDE (YAQĪN)
IN AL-FĀRĀBĪ'S EPISTEMOLOGY**

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The concept of “certitude” (*al-yaqīn*) is a familiar one in Arabic discussions of the theory of demonstration detailed in Aristotle’s *Posterior Analytics*, known in Arabic as the *Kitāb al-burhān* (*Book on Demonstration*).¹ “Certitude” is identified as the cognitive state produced in the knower by her employment of demonstrative methods, in contrast to the inferior logical arts of dialectic, rhetoric, poetics, and sophistry, which produce cognitive states that approximate the certitude of demonstration in varying degrees. “Certitude” thus functions as a technical term in Arabic accounts of demonstration, to a large extent displacing the traditional identification of the end of demonstration as the production of “knowledge” or “science” (*ilm*, equivalent to the Greek *epistēmē*). Nowhere is this more apparent than in the case of Al-Fārābī. Not only does Fārābī discuss the concept of certitude extensively in a number of his logical writings, including his own *Epitome of the Posterior Analytics* (*Kitāb al-burhān*); he also devotes an entire treatise, known as the *Conditions of Certitude* (*Šarā’iṭ al-yaqīn*) to the project of specifying the criteria according to which a cognizer can be said to have certain knowledge of any proposition.²

Despite the prevalence of certitude in Arabic accounts of demonstration, one would be hard pressed to identify a specific counterpart in Aristotle’s own presentation of his theory of demonstration in the *Posterior Analytics*. Indeed, one of the features that makes the Arabic conception of certitude important and philosophically interesting is that it is unprecedented in the underlying Aristotelian theories that it is meant to explicate. In the discussion that follows my aim is to explore Fārābī’s conception of certitude in order to ascertain what role it plays in augmenting the received epistemology of the Aristotelian *Analytics*. My focus will be on the

Conditions of Certitude, since it represents Fārābī's most systematic and independent account of the nature of certain knowledge. But I will also consider Fārābī's account of certitude in his *Epitome of the Posterior Analytics*, in an effort to determine where Fārābī himself locates the interface between his account of certitude and Aristotle's theory of demonstration. First, however, it will be helpful to consider some features of the Arabic version of the *Posterior Analytics* that help to explain the origins of the concept of certitude and its relations to the concepts of knowledge (*epistēmē*/*'ilm*) and demonstration (*apodeixis*/*burhān*).

**KNOWLEDGE, DEMONSTRATION, AND CERTITUDE
IN THE ARABIC POSTERIOR ANALYTICS**

In Aristotle's *Posterior Analytics*, the principal epistemological concepts are *epistēmē*, knowledge or science, and *apodeixis*, demonstration. To this we may add *nous* (=Arabic *'aql*), the understanding of the first principles of *epistēmē* discussed in *Posterior Analytics* 2.19; *doxa* (=Arabic *ẓann*), traditionally rendered "opinion," an inferior cognitive state with which *epistēmē* is contrasted in 1.33;³ and *aisthēsis* (=Arabic *ḥiss*), sense perception, which Aristotle disqualifies as a source of *epistēmē* in 1.31. Nowhere, however, does Aristotle include in his list of cognitive states any further concept that might naturally be translated as "certitude," or which can be clearly identified as the Greek counterpart for the Arabic technical term *yaqīn*.

Nonetheless, it is to Abū Bishr Mattā's translation of the *Posterior Analytics* that we must look to find the origins of the notion of certitude that Fārābī and the later *falāsifa* will isolate as a distinct epistemological category. In his translation of Book 1, chapter 2, 71b17-19, which contains Aristotle's first definition of *apodeixis*, Abū Bishr employs the term *al-yaqīn* and its cognates to translate a variety of terms descriptive of the cognitive states which contribute to or are produced by demonstrative syllogisms. In the chart that follows I give the Greek text, along

with Abū Bishr’s Arabic version, my English translation of the Arabic, and Jonathan Barnes’s contemporary rendering of the Greek:

Aristotle	Abū Bishr	English trans. of Arabic	Barnes trans.
Φαμέν δὲ καὶ δι’ ἀπο- δείξεως εἰδέναι. ἀπόδειξιν δὲ λέγω συλλογισμὸν ἐπιστημονικόν· ἐπιστημονικὸν δὲ λέγω καθ’ ὃν τῷ ἔχειν αὐτὸν ἐπιστάμεθα.	وقد نقول إنّنا نعلم علمًا يقينًا بالبرهان أيضًا؛ وأعني بالبرهان القياس المؤتلف اليقيني؛ وأعني بالمؤتلف اليقيني الذي نعلمه بما هو موجود لنا.	And we say that we also have certain knowledge through demonstration. And I mean by “demonstration” the composite certain syllogism; and I mean by “the composite certain syllogism” one through which we have knowledge just by its being existent in us.	[B]ut we say now that we do know through demonstration. By demonstration I mean a scientific deduction; and by scientific I mean one in virtue of which, by having it, we understand some- thing. ⁴

A comparison of the Greek and Arabic versions of the above passage gives no indication that Abū Bishr had any specific aim in mind in employing the term *al-yaqīn* in his translation. One might have expected him to use it in order to distinguish between the two epistemic terms that Aristotle employs in the course of defining “demonstration,” *oida* and *epistamai*. A natural strategy for translating these terms would have involved reserving *'alima* for *epistamai* as a way of reflecting the fact that *epistēmē* and *epistamai* are cognate in a manner parallel to *'ilm* and

'alima. But in the course of this single passage, Abū Bishr first translates *eidēnai* as *'alima 'ilman yaqīnan*, and he twice translates the phrase *sullogismos epistēmōnikos*—a “scientific deduction” or a “syllogism which produces knowledge”—as *al-qiyās al-mu'talaf al-yaqīnī*, “the composite, certain syllogism.” The upshot of this latter decision is to distort Aristotle’s focus on demonstration as a means for *producing* the cognitive state of knowledge in the one who possesses it, and to suggest instead that demonstrations are primarily distinguished by the fact that they are *composed* from certain premises.⁵

Overall, then, Abū Bishr appears to use cognates of both *'ilm* and *yaqīn* indifferently to render Aristotle’s technical term *epistēmē* and its cognates. He does not reserve either term for this technical usage, and he will use both terms to render a variety of non-technical epistemic expressions in the Greek text. It should also be noted that the term *yaqīn* does not appear with any great frequency in the Arabic version of the *Posterior Analytics*, so Abū Bishr’s decision to introduce it into the definition of demonstration, the very subject-matter of the *Posterior Analytics*, could easily have led Arabic audiences to assume that *yaqīn* was a pivotal concept within Aristotelian epistemology. According to the Arabic Aristotle, then, a demonstration is a *source* of certain knowledge. Certitude, moreover, enters into the definition of demonstration itself insofar as a demonstration is a “composite, *certain* syllogism.” Finally, a syllogism is certain just in case it causes us to have knowledge simply by existing in us. In order to understand the nature of both the knowledge that is the goal of demonstration, and that of demonstration itself, an adequate account of certitude thus becomes central to any Arabic Aristotelian, even if it is a project that seems alien to a contemporary interpreter of Aristotle’s text. And it is this project that Fārābī undertakes in *The Conditions of Certitude*.

THE CONDITIONS OF CERTITUDE

Fārābī's *Conditions of Certitude* begins by stipulating six criteria that must be met in order for "absolute certitude" (*al-yaqīn 'alā al-iṭlāq*) to obtain. Fārābī's addition of the qualification "absolute" here is significant, for although certitude itself is a defining characteristic of demonstration according to the Arabic Aristotle, Fārābī admits the existence of relative forms of certitude that are appropriate to logical arts other than demonstration, and that bear upon the various types of non-scientific propositions that we employ in our everyday lives. Unless otherwise indicated, however, when I use the term "certitude" it is this absolute form of certitude to which I refer.

Fārābī's six conditions form the parts of a complex definition of certitude which analyzes it into a genus-component and a series of five differentiae. These conditions apply to all forms of absolute certitude; that is, they are characteristic not only of the scientific knowledge we have of the conclusions of demonstrations, but also of our knowledge of the indemonstrable principles of demonstration. Hence, they apply equally to *'ilm/epistēmē* and to *'aql/nous*.

The basic list of six conditions is given in the opening paragraph of the treatise. Fārābī then proceeds to provide a detailed analysis of each of the individual conditions in turn. As will become apparent in what follows, however, Fārābī's initial descriptions of a number of these conditions can be misleading. Conditions that appear straightforward in the opening enumeration turn out to be more complex than they seem at first glance; and what Fārābī intends by each of these conditions is often quite different from what one might have expected from a cursory reading of the initial list alone:

Absolute certitude is: [1] to believe of something that it is thus or not thus; [2] to agree that it corresponds and is not opposed to the existence of the thing externally; [3] to know that it corresponds to it; and [4] that it is not possible that it not correspond to it or that it

be opposed to it; and further [5] that there does not exist anything opposed to it at any time; and [6] and that all of this does not happen accidentally, but essentially.⁶

Hence, according to Fārābī's opening summary, a subject, S, has absolute certitude of a proposition, *p*, if and only if:

1. S believes that *p* (the *belief condition*);
2. *p* is true (the *truth condition*);
3. S knows that *p* is true (the *knowledge condition*);
4. it is impossible that *p* not be true (the *necessity condition*);
5. there is no time at which *p* can be false (the *eternity condition*); and,
6. conditions 1-5 hold essentially, not accidentally (the *non-accidentality condition*).

Fārābī's first three conditions for certitude initially seem evocative of the traditional tripartite definition of knowledge as "justified true belief," which has become a standard though much disputed starting point in contemporary epistemological discussions.⁷ In the case of Fārābīan certitude, however, the justification condition—having good reasons or sufficient evidence for one's belief—is replaced by the knowledge condition. Yet as we shall see, Fārābī's explanation of the meaning of "knowledge" later in the treatise turns out to point to something quite distinct from justification. Moreover, Fārābīan certitude requires that additional conditions be met in order for an item of belief to count as absolutely certain, and a number of these other conditions, rather than the knowledge condition, play a justificatory role. Initially, then, Fārābīan certitude seems to be a stronger epistemic state than knowledge, since knowledge itself is a necessary ingredient within certitude, yet not sufficient to elevate a belief to the status of absolute certainty. As we will see in our examination of each of Fārābī's six conditions, however, the picture is somewhat more complicated than this, since Fārābīan certitude admits of degrees in a way that

scientific knowledge does not. Moreover, Fārābī appears to use “knowledge” in this context to mean something different from the cognitive grasp of the conclusion of a demonstration.

THE BELIEF CONDITION

According to Fārābī, the belief condition gives us the genus of certitude (*ḡins al-yaqīn*). Fārābī’s preferred term for “belief” here is *i’tiqād*, but he accepts both *ra’y* (“opinion” or “belief”) and *iḡmā’* (“consensus”) as suitable synonyms for belief. The term *ra’y* should not be conflated with the Greek *doxa*, which is rendered as *ẓann* in the Arabic version of *Posterior Analytics* 1.33.⁸ The term *iḡmā’* is drawn from Islamic jurisprudence and exegesis, reflecting Fārābī’s general practice of explaining technical philosophical terms with reference to their ordinary language counterparts or to the technical terminology of indigenous Islamic arts. Since the belief condition is relatively straightforward, Fārābī limits himself to these linguistic comments, and he devotes most of his attention to explaining the role of each of the five differentiae (*fuṣūl*) in specifying a subset of beliefs as certain.

THE TRUTH CONDITION

Fārābī’s discussion of the truth condition consists in a brief account of what we would now call the correspondence theory of truth. The truth condition involves the “correspondence” (*al-muṭābaqa*) of one’s belief, whether affirmative or negative, with the state of affairs that obtains externally (*wuḡūd al-šay’ min ḥārij*), or conversely, the absence of opposition between what the belief states and the external state of affairs.⁹ So if *p* is the proposition, “Sand is white,” then *p* is true if and only if sand is actually white in the external world; and if *p* is the proposition, “Violets are not red,” then *p* is true if and only if no red violets exist outside the mind. Fārābī offers the following definition of “truth” (*al-ṣidq*) as just such a correspondence:

For this is the meaning of “truth,” namely, a certain relation of the belief to what is believed (*idāfa mā li-l-i‘tiqād ilā al-mu‘taqad*) insofar as the latter is [1] external to the soul; or insofar as it is [2] external to the belief; or insofar as it [3] is a subject (*mawḍū‘*) of the belief. For the existents external to the beliefs are subjects of those beliefs, and the beliefs only become false or true through their relation to their subjects which are external to the soul, or insofar as [their subjects] are external to the beliefs. For if their qualities with respect to affirmation and negation correspond and are not opposed to the qualities of the subjects which are external with respect to affirmation or negation, then they are true, whereas if the qualities of the subjects are opposed to the qualities of the beliefs, the beliefs are false.¹⁰

Fārābī expends considerable effort formulating a precise description of the correlates in the correspondence relation. This is because the standard formulation, which defines a true belief in terms of its correspondence to *external* existents, unnecessarily restricts the realm of truth. If the formula were taken as it stands, one could only have true beliefs about physical and material entities whose nature is to have extramental existence. Truth would exclude all those propositions that concern intramental, psychological states, as well as logical and linguistic truths, that is, what the medievals call “secondary” intelligibles or intentions.

This concern is made explicit in an interpolated passage whose exact place in the main argument of the text is unclear.¹¹ In this passage, Fārābī explains that the term “external” is not meant to exclude mental existents or psychological states as the subjects of truth-valued propositions, but rather, any impression in the soul which is signified by the subject-term of a proposition counts as external.¹² “External,” then, does not mean “external to the soul,” but rather, “external to the belief.”¹³ This qualification thus allows Fārābī to uphold the claim that logic and psychology are indeed demonstrative sciences, even though their subjects are by definition *in* the soul. In the present context, however, such a qualification is also important for its

bearing upon Fārābī's third criterion of certitude, the knowledge condition. Since the knowledge condition introduces a form of second-order belief into the definition of absolute certitude, it is essential that the truth condition be framed in such a way as to include true beliefs whose subjects are themselves *other beliefs*:

For it may be believed that the belief itself is a certitude or an opinion (*ẓann*). Thus the belief which is believed to be true or false, or to be a certitude or an opinion, or to be one of the other things which it is possible to predicate of a belief, is also external, since that which is believed of the belief—for example, that it is an opinion or a certitude—is external to the belief. And this is the case with most logical matters and with the intelligibles which are called “secondary intelligibles.”¹⁴

It should be noted that in this passage Fārābī substitutes “certitude” (*yaqīn*) for “knowledge” (*‘ilm*) in the traditional contrast between knowledge and opinion which is the focus of *Posterior Analytics* 1.33. This substitution cannot be explained with reference to the Arabic translation of the *Posterior Analytics*, since the term *yaqīn* does not appear in Abū Bishr's version of 1.33.¹⁵ Rather, it seems to be a natural outgrowth of the introduction of certitude as a mental state distinct from knowledge, a point that emerges more clearly in Fārābī's explication of the knowledge condition.

THE KNOWLEDGE CONDITION

Fārābī claims that it is the third condition that distinguishes certitude from mere opinion. Here Fārābī uses the standard Arabic translation for *epistamai*, *‘alima*, to designate the cognitive state captured by the knowledge condition, rather than the looser term *‘arafa*, which is often used for acquaintance knowledge, sensible awareness, and other forms of immediate contact with an object.¹⁶

And our saying, “To know that it corresponds and is not opposed to it,” is only made a condition for [certitude] because it is conceivable for it to happen that [the belief] corresponds to the thing but that the person who believes is not aware that it corresponds, but rather, it is in his view possible that it may not correspond.¹⁷... This would be a true opinion of whose truth the believer is unaware, in which case this is true for him accidentally. Likewise if it does not correspond, whereas it is in his view possible for it to correspond, then this is a false opinion of whose falsity the believer is not aware, in which case this is a false opinion for him accidentally. And in this way there may be both true opinions and false opinions. And the condition of truth in the case of certitude is that it not be accidental. And for this reason it is necessary that a human be aware (*ša'ara*) of the correspondence of the belief to the existence or non-existence of the thing (*amr*).¹⁸

It is here in the knowledge condition that we first begin to see the effect of substituting certitude for knowledge as the central epistemological concept within the theory of demonstration. This allows Fārābī to introduce a level of second-order knowledge into the theory of demonstration without obvious regress or circularity. The object which one *knows* is now established as distinct from the object about which one is *certain*: knowledge is usually about the external world, e.g., my belief that “a human being is an animal”; whereas *certitude* concerns the status of my first-order belief about *p*, e.g., “My belief that ‘human being is an animal’ is true.” If the third condition for certitude is absent, then, a person may indeed have a true belief that corresponds to some actual state of affairs, but she will not have the requisite second-order belief that this correspondence itself must hold. This, then, is what reduces her belief to the level of opinion, since it allows her to hold that the correspondence only happens to be the case.¹⁹

Now from this initial characterization of the knowledge condition, one would assume that the knowledge at issue here is propositional. Fārābī’s descriptions of it are most naturally understood as propositional (“to know *that* it corresponds”), and its second-order status would seem to

require a propositional object. Yet Fārābī does not explicitly say this: in particular, he does not identify the knowledge here as a form of “assent” (*taṣdīq*) as opposed to simple “conceptualization” (*taṣawwur*), which would be the standard way for an Islamic philosopher to stipulate knowledge that is propositional and truth-valued.²⁰ In fact, when Fārābī proceeds to offer a more detailed account of his third condition, the models he invokes are all forms of knowledge that the Arabic tradition does not normally understand as propositional. There is already an indication of this in the language that Fārābī chooses in the passage just cited to explain the second-order knowledge on which the third criterion for certitude depends. While Fārābī initially employs the term *‘ilm*—equivalent to the *epistēmē* of the *Posterior Analytics*—throughout the remainder of his explication he switches to the term “awareness” (*shu‘ūr* and its cognates), an expression that is generally associated with forms of acquaintance-knowledge, such as self-consciousness and the sensible awareness of particulars, which are taken to be direct and non-propositional.

Moreover, in his ensuing attempt to clarify the meaning of “knowledge” as used in the third condition, Fārābī takes his main inspiration from Aristotle’s account of the stages of actual and potential knowledge in *De anima* 2.5, a source that seems somewhat out of place in a text deriving from the logical teachings of the *Posterior Analytics*. For in the *De anima* the topic under consideration is the initial acquisition of simple intelligible concepts, a process that is prior to and presupposed by the intellect’s subsequent capacity to form both complex propositional judgements and inferential chains of reasoning.²¹

And the meaning of his “knowledge” (*ma‘nā ‘ilmi-hi*) is that the state of the intellect with respect to the intelligible—that is, the existent which is external insofar as it is the subject of the belief—comes to be like the state of vision with respect to the visible at the time of perception. For this relation is knowledge. And sometimes it is potential, and sometimes

it is actual. That which is potential is of two types: either [1] it is in proximate potency, or [2] it is in more remote potency. And remote potency is such that whenever the human being desires, that which is in potency emerges into actuality. And the remote admits of degrees. For example, the capacity of the person who is asleep to see; the capacity of the person who is unconscious to [see]; the capacity of the hare when it is first born; and the capacity of the embryo.²²

The visual analogy here serves to reinforce Fārābī's earlier suggestion that the knowledge condition consists of a direct acquaintance with or awareness of the extrinsic subject of the proposition of which one is certain. Knowledge, like vision, requires direct epistemic contact with the object known at the time when it is occurring. And it is that direct relation to the object of one's belief that must be present to guarantee certitude. Certitude, inasmuch as it is a relation dependent upon the existence of its two correlates, the knower and the known, thus requires simultaneous acts of self-awareness of one's own cognitive states and awareness of the external object of one's knowledge. It is a second-order act primarily because it is reflexive, then, and Fārābī ultimately appears to be unconcerned with whether such a reflexive act can or need be propositional in form.

There is one further puzzling feature of Fārābī's account of knowledge as a form of epistemic contact akin to visual perception. Initially Fārābī focuses on the *directness* of knowledge when he draws the visual analogy, emphasizing that the epistemic contact at issue involves the presence of the object to the knower at the time of its apprehension. Just as I can only see an object if it is present in my visual field, so too I can only *know* that object if it is present to my mind in such a way that I am *consciously* thinking of it now. Yet this would seem to eliminate all forms of dispositional or habitual knowledge in which the object is not actually present to the knower. To exclude such knowledge from the scope of certitude seems oddly restrictive, however, and

incompatible with the general thrust of Fārābī's Aristotelian cognitive psychology. Moreover, Fārābī's account of the degrees of potential knowledge at the end of this passage shows that he is willing to count even knowledge which is in remote potency as fulfilling his third condition of certitude. So clearly something else must be meant. It is likely that the direct epistemic contact to which Fārābī alludes is not, despite his use of temporal language, meant to limit knowledge to cases in which the knower is actually and presently in contact with the object. Rather, what is intended is the exclusion of all forms of second-hand knowledge which cannot be traced back to the knower's direct awareness of the extrinsic subject of the belief. Such indirect pseudo-knowledge, as we later learn, is relegated by Fārābī to the realm of rhetoric, and perhaps of dialectic as well, and by its very nature it is something that prevents one from attaining absolute certitude. Fārābī will include in this category everything based on mere authority rather than on one's own recognition of the correspondence between one's belief and its extramental object.

THE NECESSITY CONDITION

The next three conditions outlined by Fārābī are closely related to one another, and together they are evocative of the traditional Aristotelian requirement that demonstrative knowledge be necessary and immutable. It seems odd that Fārābī should choose to list the necessity condition first, since it would appear on the surface to be the strongest of the three remaining conditions, and yet each successive condition seems designed to ensure a progressive narrowing of the scope of absolute certitude. This impression of oddness fades, however, when we realize that the necessity condition itself, despite initial indications to the contrary, does not stipulate that only necessary propositions or necessary existents can be the objects of absolute certitude. Rather, the necessity condition states that the believer must not only know—that is, be aware—that her belief is true; she must also recognize that it is impossible for it to be false. And that impossibility,

Fārābī rather cryptically explains, ultimately derives from the fact that the believer has acquired her belief by a process that ensures or necessitates cognitive success:

And our saying, “that it is impossible (*ḡayr mumkin*) for it not to correspond or to be opposed,” is the assurance (*ta’kīd*) and strength (*waṭāqa*) with which conviction and belief (*al-i’tiqād wa-al-ra’y*) enter into the definition of certitude. And it is necessarily required that [the belief] does correspond and that it is not possible for it not to correspond, and that it be in some state that is not possible to oppose. Rather, its state is such that it is necessarily required that it correspond [to the thing] and not be opposed to nor contradict it. And *this strength and assurance in the belief itself is an acquisition (istifāda) from the thing which produces [the belief], this being either naturally (bi-tabī’a) or through the syllogism (emphasis added)*²³

For a belief to be certain, then, it must be such that its non-conformity to reality is impossible. Contrary to what we might expect, however, Fārābī does not take this sort of necessity to be a function of the nature of the *object* known. As yet, merely possible or contingent existents, propositions, and states of affairs have not been ruled out as candidates for certitude. The necessity condition, then, does not point to the *necessary existence* of the object of the belief itself; modality in this sense does not enter into the definition of certitude until the fifth condition. Rather, necessity here is attributed to the *assurance* and *strength* of the belief itself, the feeling of confidence that one cannot be mistaken, that one’s belief is both incorrigible and infallible. We are talking here of what we would call psychological rather than propositional necessity

While Fārābī’s necessity condition is cast primarily in psychological terms, however, this does not mean that it is merely subjective. Rather, the feeling of confidence that certitude grants to its possessor is ultimately a function of the soundness of those natural psychological processes which caused one to hold the belief—it is an “acquisition” conferred by the processes which

underlie the belief's formation. Fārābī's causal explanation of the necessity condition thus has a reliabilist ring to it. The correspondence between one's belief and the reality that it signifies is assured only if it is produced by a reliable method which by its very nature is truth-producing. Such a reliable method can either be immediate and non-discursive—or as Fārābī puts it, “natural”—as is the case with the processes by which first principles and primary propositions such as the principle of contradiction are acquired; or it can be the result of necessary formal inferences, as is the case with conclusions derived from sound syllogistic arguments. In this way, then, the necessity condition forges an explicit link between the Fārābīan concept of certitude and the two cognitive states that Aristotle identifies as central to scientific demonstrations—the *epistēmē* of conclusions and the *nous* of principles. Yet necessity as understood here does not yet restrict the scope of certitude to coincide with the realm of demonstrative knowledge and its principles, a point that will emerge more fully from a consideration of the fifth condition.

THE ETERNITY CONDITION

It is Fārābī's fifth condition, which I have labelled the “eternity condition,” that reflects the traditional assumption that knowledge can only be had of objects which are absolutely necessary in themselves, inasmuch as they are eternal and immutable. Not only must it be impossible for a certain belief not to correspond to reality at the time when the belief is held; it must also be the case that “it is not possible for anything opposed to it to exist *at any time*.”²⁴ This condition provides additional strength and security (*ta'kīd*) to the belief beyond what is provided by the necessity condition, for it anchors the belief in the “assurance (*ta'akkud*) and strength of the thing which is the subject of the belief in its external existence.”²⁵ Only if the extramental object of the belief is itself incapable of undergoing change at any time can it provide an additional guarantee that a belief that is true at time t_1 will not become false at some future time, say, t_2 . As I suggested

in the previous section, then, it is this condition, rather than the necessity condition, that introduces properly modal concerns into the definition of absolute certitude. Indeed, Fārābī's account of the eternity condition prefigures Avicennian modal metaphysics terminologically, for Avicenna echoes Fārābī when he adopts the phrase "assurance of existence" (*ta'akkud al-wuḡūd*) to describe the characteristic of necessity that gives it priority over the other modal notions.²⁶ With the addition of the eternity condition, Fārābī also excludes from the scope of absolute certitude "universal existential propositions," that is, propositions which are lacking explicit modal quantifiers, illustrated in the passage below by the example, "Every human is white."²⁷

While Fārābī's addition of the eternity condition thus brings his conception of certitude in line with the traditional and more restrictive view of knowledge, it is equally important to recognize that the very need to specify an eternity condition for absolute certitude indicates Fārābī's willingness to admit an attenuated form of certitude in the case of contingent propositions:

The former condition [i.e., the fourth condition] may also occur in sensibles and in existential propositions, whereas this [fifth condition] occurs in beliefs whose subjects are unqualifiedly necessary intelligibles. For sensibles may be true, and it may be impossible for them to have been opposed to our beliefs that they are such and such. It may, however, be possible (*mumkina*) for them to cease at an indeterminate time, such as Zayd's being seated; or it may be inevitable for them to cease at some determinate time, such as the eclipse of the moon which one is now seeing. So too with universal existential propositions, like your saying, "Every human is white." As for that which cannot be opposed, not even at any particular time, this only obtains in the case of the necessary intelligibles. For in this case the belief cannot become opposed to existence at any particular time, nor can existence become opposed to the belief at any particular time.²⁸

Fārābī's concession here that one can have certain and necessary cognition of contingent propositions, even though they fall short of absolute certitude, represents an important loosening of the strictures on the traditional conception of knowledge. While Fārābī retains the traditional Aristotelian view that truly demonstrative knowledge can only be had of "necessary intelligibles" which are in themselves eternal and unchanging, he is nonetheless able to do justice to our intuition that we are certain of many things that are not eternal and necessary truths.

Fārābī's remarks here on the certitude that does accrue to contingent truths also reinforce and extend the reliabilist stance that characterizes his account of the necessity condition. For it is now clear that Fārābī's reliabilism applies not merely to our grasp of the immediate first principles of demonstration, such as the principles of contradiction and the excluded middle, and propositions such as "the whole is greater than the part," but that it also extends to all immediate *sensible* observations. If I observe Zayd sitting at time t_1 , then "Zayd is sitting" is necessarily true at t_1 , and my knowledge that it is true is likewise necessary. This proposition is not, however, absolutely certain, since it is possible that at some indeterminate time in the future, the proposition, "Zayd is sitting" will cease to be true and if I persist in my belief, my belief will become false. The same is true for events whose occurrence and non-occurrence at particular times are determinate and necessary, even though the event itself is a contingent and not a necessary existent. Hence, Fārābī allows in the above passage that I can be certain of the moon's eclipse *when I am observing it*, and that I can also be certain that the eclipse will cease at some determinate time in the future, when the conditions which necessarily produce eclipses are no longer present.²⁹ Such certitude is not absolute, so we might want to call it "merely temporal certitude." By the same token, universal existential propositions without explicit modal quantifiers—such as "every human is white"—are excluded by the eternity condition because on

Fārābī's usual explication of their modal status, such statements express the view that the connection that now *actually* holds between the subject and predicate may or may not have held in the past or may cease to hold in the future.³⁰

While it is thus clear that Fārābī is willing to allow for a form of merely temporal certitude, the *Conditions* remains vague about those propositions that are at the intersection between the intelligible and the sensible, that is, universal, necessary propositions which are derived from experience or induction. Are either of these types of propositions included under the scope of “necessary intelligibles” and thus in conformity with the eternity condition? And if so, by which of the two methods discussed in the necessity condition are they acquired—by nature or by some form of syllogistic inference? This is one of the few topics on which the parallel account of certitude in Fārābī's *Epitome of the Posterior Analytics* is more complete, so I will postpone consideration of the status of empirical knowledge until my examination of that text.

THE NON-ACCIDENTALITY CONDITION

According to Fārābī, the definition of absolute or unqualified certitude is completed through the non-accidentality condition, which is offered not as an additional differentia over and above the first five, but rather, as a qualification of the way in which these other conditions obtain:

And our saying, “that whatever of this occurs should occur essentially, not accidentally,” is that by which the definition of unqualified certitude is completed. And this is because it is not impossible for all these things to occur to a human being by chance rather than from things whose natural function is to cause them to occur.³¹

As presented here, then, the sixth condition is not equivalent to the traditional Aristotelian claim that demonstrative knowledge is restricted to the essential nature and properties of the object known, and precludes all merely to accidental or contingent facts about it. This traditional

requirement is instead expressed by Fārābī's eternity condition, which we've seen is designed to eliminate from the scope of absolute certitude both merely contingent truths and knowledge that is purely sensible.³² The principal function of Fārābī's sixth criterion is to eliminate those rare but conceivable cases in which all the conditions of certitude are met by chance. Fārābī's motivations for adding this sixth condition are closely tied up with his concern to differentiate philosophically demonstrative certitude from dialectical and rhetorical conviction. But his account is puzzling in some ways, since the other five conditions taken conjointly (and in some cases even in isolation), seem sufficiently strong to rule out any such chance occurrences.

For example, the requirement of the necessity condition that one's belief be produced by a reliable method of acquisition, be it natural or inferential, seems to rule out accidental certitude by stipulating a causal process that by itself guarantees the truth of the resultant belief. And the eternity condition narrows the range of certitude to "necessary intelligibles," which it seems unlikely that one could know merely accidentally. Still, Fārābī explicitly claims that accidental certitude may occur in the case of "necessary propositions."

To clarify this assertion, Fārābī identifies four possible circumstances which might render certitude merely accidental: (1) lack of awareness on the part of the believer; (2) induction; (3) the "renown and testimony of all people"; or (4) the testimony of a person esteemed by the believer.³³ Fārābī says little about (1) and (2), preferring instead to focus on the latter two cases where some extrinsic factor, rather than direct epistemic contact with the object known, is the cause of one's conviction. But it seems possible to reduce each of these causes to a simple default of one of the first five conditions of certitude, suggesting that this sixth condition may in the end be superfluous.

Lack of awareness, for example, seems to reduce to a default of condition three, the knowledge condition, which, as we've seen, Fārābī tends to interpret as consisting of a direct awareness of or epistemic contact with the object of one's belief. Someone may hold a true belief about a proposition that is in itself a necessary intelligible, but be unaware of the necessity of what she believes to be the case. As I have noted already, the overlap here is foreshadowed in Fārābī's earlier reference to the "accidental truth" of an opined proposition in his account of the third condition. So the second-order knowledge that one's belief corresponds with reality is already supposed to ensure that if *S* believes that *p* is true, *S* cannot be said to be certain of *p* if *p* just happens to be the case, or if *S* is not consciously aware of the correspondence between *p* and the actual state of affairs it represents.

As for induction as a cause of merely accidental certitude, while Fārābī's remark here is highly elliptical, the explanation of what he means is probably to be found in the account of induction outlined in the *Epitome of the Posterior Analytics*, where the failure to produce necessary certitude is an identifying characteristic of induction. There Fārābī argues that while one might inductively survey enough particulars so that one's judgement actually holds universally and necessarily of a given class of things, if induction is the sole basis for that judgement then its necessity will remain merely incidental. This is because by definition an induction can extend only to those individuals which one has actually observed, and hence it cannot produce any truly universal intelligibles.³⁴ For example, while it may in fact be true that "All crows are black," if one believes this through induction alone, then the proposition is tantamount to the judgement, "All the crows that I have observed happen to be black."

For the most part, Fārābī's explanation of accidental certitude focuses on cases where one's belief is in some fashion second-hand. This may even be part of Fārābī's point about induction—

if one hasn't attained the universal, one's knowledge of the unobserved instances to which the judgement applies is merely second-hand. Certitude cannot be essential if the evidence on which it is based does not come from the believer's "own vision" (*'an baṣīrati nafsi-hi*), and his cognitive state is not that of "someone who considers the thing at the time when he is considering it and is aware that he is considering it."³⁵ Fārābī catalogues a long list of circumstances which may contribute to such indirect belief—emotional attachments to or dislike of an authority figure, partisanship for a group or cause, personal tastes, and so on.³⁶ Fārābī identifies reliance upon external authority as the mark of rhetorical, and to a lesser extent dialectical and poetic, modes of discourse and thinking. So it seems that accidental certitude is one of the main reasons for the inferiority of the cognition produced by this cluster of non-demonstrative logical methods.³⁷

Fārābī adds one further clarification of the need to distinguish authentic from merely accidental certitude. He notes that people are often confused about the reasons for their beliefs being corrupted, especially when they are still in the course of investigating the matter at hand. Hence they "may suppose what is not certain is certain." Fārābī argues that the cure for this problem is not merely to take refuge in the traditional assumption that certitude is guaranteed by the nature of that "from which" (*'an-hu*) one's belief arises, but also that "in which" (*fī-hi*) it arises.³⁸ While Fārābī's use of these prepositions is far from transparent, I take it that he means by this that it is not sufficient to assume that if one is investigating necessary intelligibles, one's knowledge will by its very nature be certain. Certitude requires that the whole series of conditions be fulfilled, both those that pertain to the nature of the object itself—its necessity and eternity—and those that pertain to the methods by which the knower acquires the knowledge, and the causal processes that give rise to her beliefs. The non-accidentality condition is meant to drive this point

home. Still, if this is the case, then it seems we must conclude that Fārābī's sixth condition is superfluous, and that it ultimately collapses into the other conditions, in particular the third. Its purpose is reiterative and emphatic, and it adds no substantially new criteria to Fārābī's other conditions.

CERTITUDE, DOUBT, AND DEMONSTRATION

At the end of the *Conditions*, Fārābī addresses the question of why the problem of certitude is of philosophical importance, and what epistemological function is served by delineating the conditions of certitude. While it is customary to assume that pre-modern philosophers are not overly concerned with sceptical challenges, Fārābī clearly believes that the problem of certitude is at least in part tied up with the need to attain knowledge that is immune to doubt, or what Fārābī calls "opposition" (*inād*).³⁹ Fārābī claims that if all the conditions for absolute certitude are met, one's belief in a proposition is in all respects unassailable: the only way that the belief itself can cease to exist is through "death or insanity and the like, or through oblivion."⁴⁰ Since the object of a proposition that is absolutely certain is necessary and eternal in itself, this form of certitude cannot be destroyed by any change which the object itself undergoes.⁴¹ The eternity condition thus provides an absolute guarantee of infallibility from the side of the object known. For the same reason, narrowing the scope of absolute certitude to universal and necessary truths also makes certain beliefs unassailable by the mounting of sceptical and sophistical challenges, the main source of external opposition to belief.

Fārābī argues this point through an elaborate analysis of the means which the sophist might use to oppose a belief, aimed at showing that such challenges can only be successful if at least one of the conditions of certitude is in default, unbeknownst to the putatively certain knower. Fārābī argues that since we are dealing with universal propositions that state necessary and

essential truths, we can always analyze the more complex certitudes into simple propositions and inferential patterns that will shore up the belief against doubt. This is because absolute certitude that p entails a number of corollary certitudes, such as that not- p is false and that the propositions entailing not- p are false.⁴² Hence “certitude in the truth of the proposition cannot arise without certitude in the falsity of its opposite.”⁴³ Moreover, the absolutely certain propositions that comprise the speculative sciences are finite in number and for that reason always verifiable in principle. The primary immediate propositions shared by all the sciences, and the special principles of each individual science, for example, physics or geometry, are “determinate and limited in number, and it is known how many (*kam*) they are.”⁴⁴ So one can always retrace the steps by which one drew conclusions in these sciences back to these more evident certainties. More importantly in Fārābī’s eyes, one can easily falsify the arguments used to oppose certain truths, since those arguments must always contain some proposition that is the negation of one of these principles. Fārābī expresses considerable confidence that the person who has attained absolute certitude has unassailable beliefs, in part because he appears to believe that knowledge of the truth of p always has as its by-product knowledge of the falsity of not- p . Hence, absolute certitude permits the immediate recognition of sophistries and the ability to pinpoint the fallacies they contain. And in those few cases where a person who has mastered a science is not yet aware of a subset of its conclusions, she will still be immune to doubt about those propositions, since she possesses the necessary tools that will allow her to extend the scope of her certitude to include them as well:

Since the premises taken in opposition are the opposites of the principles, they cannot occur to the human being unless he is aware of their falsity at once; thus for this reason he will not yield to the opposition. In the same way, if the things which are taken in opposition are the opposites of the conclusions arising from the principles, and he indeed

knows these conclusions and has come to know demonstrations of them, then he can only have become certain of them if he has also become certain of the falsity of their opposites. And in the same way, [when] they occur to him, he knows their falsehood immediately. And he learns of them through demonstrations which reach these conclusions, and he opposes them through these [demonstrations], so that they are proven false. And if these things are the opposites of conclusions in this art of which he is not yet aware, then he will pause over their nature until he is aware of them.⁴⁵

Fārābī appears to hold that the foregoing points state both psychological as well as logical facts about necessary certitude. That is, his claim in this passage is that one not only acquires the *disposition* to disprove the opposite of that about which one is absolutely certain, but that one also possesses, as a by-product of one's positive knowledge, *actual* awareness of the falsity of all contrary propositions. This claim seems to share certain coherentist assumptions with Fārābī's subsequent contention that the person who possesses an incomplete, though presumably fairly advanced, knowledge of some speculative science is also immune to doubt about those few conclusions that she has not yet consciously worked out. In both cases Fārābī presupposes that the sciences are unified to such an extent that each proposition is ultimately entailed by all the others, so that once one has a sufficiently complete set of conclusions, one in effect possesses certitude about the entire science. Exactly how far Fārābī would extend this claim, or how much of a science one would need to possess in order to claim this virtual certitude, remains unclear.

Another consequence of Fārābī's claim that absolute certitude is in all cases immune to doubt is that if any belief is able to be overturned by opposition, then it was not in fact a certitude, but only an opinion (*ẓann*), and hence one of the conditions of absolute certitude was defective in it. Fārābī's analysis of how this is possible takes the form of a reduction of non-absolute certitude to

two basic types: (1) contingent or temporal certitude; and (2) merely supposed certitude (*maznūna*).

Contingent certitude can legitimately be labelled certain at the time when the belief is held, but it fails to satisfy the fifth or eternity condition of absolute certitude, since the opposite of the proposition that one believes, $\sim p$, will at some time be true. In explaining this form of non-absolute certitude Fārābī rehearses the distinction made in his account of the fifth condition between cases where $\sim p$ will necessarily be true at some determinate time in the future, such as my belief that I am seeing a partial eclipse; and cases where p may cease to be true at some indeterminate future time, such as my belief in Zayd's being seated. In these cases a person's certitude does not cease through external opposition or any weakness in the evidentiary grounds for her belief, but rather, because of the "cessation of the thing (*amr*) which is the subject of the belief."⁴⁶ Fārābī is willing to call contingently certain beliefs such as these "knowledge" (*'ilm*), and he adds the interesting point that some additional condition must be satisfied in them "in place of the fifth condition" (that is, the eternity condition), which stipulates that only universally necessary propositions have absolute certitude.⁴⁷ Fārābī does not specify here what such an additional condition would include (presumably because it is a topic outside the scope of demonstrative theory). But the basis for his claim seems to be that since beliefs of this kind entail no defect in the knower's own cognitive state, and since they are truly certain at the time when they are held, there must be some quality in the thing or state of affairs known that guarantees their temporal truth in a manner similar to the way in which the eternity of necessary intelligibles guarantees their absolute certainty. Since these propositions are reliable and infallible within their temporal limits, then, Fārābī admits their epistemic value, if not for demonstration and the theoretical sciences, then at least for "the arts whose subjects exist as individuals, and the arts

which use universal existential propositions, such as rhetoric and many of the practical sciences.”⁴⁸

As for propositions that are merely supposed to be certain, Fārābī identifies them as stemming from a defect in the non-accidentality condition:

And supposed certitude (*al-yaqīn al-maẓnūn*) is that in which there arises, in place of the sixth condition, its opposite, such that what arises from this is said and arises accidentally, not essentially. And this is in fact an opinion (*ẓann*) and always ceases through opposition.⁴⁹

It is important to note that what Fārābī envisages here are not cases of deception in which one believes that p when $\sim p$ is in fact the case. Rather, what he has in mind are cases of true beliefs for which the evidence is not as solid as one initially supposes, and hence the believer’s confidence falters easily when confronted with opposing views. In such cases, then, one’s belief *may* be true or even certain, but only accidentally. But he identifies the result of such a defect as the replacement of certitude by “opinion” (*ẓann*), a point reflected in the very label of “supposed” (*maẓnūna*) certitude. So here too the sixth condition appears to collapse into the third. For it is the third condition whose absence is said to render one’s belief a mere opinion, and to render the truth of the propositions merely “accidental.”⁵⁰

CERTITUDE IN THE *EPITOME OF THE POSTERIOR ANALYTICS*

The concept of certitude also plays a prominent role in the *Epitome of the Posterior Analytics*. While the treatment of certitude in this text is compatible with that in the *Conditions of Certitude*, the discussions diverge in their terminology and detail. In the *Epitome*, Fārābī defines certitude in terms of the classic distinction in Arabic logic between conceptualization and assent (*taṣawwūr* and *taṣdīq*). Certitude is identified as an act of “perfect” or “complete” assent, where assent

generally “is for a person to believe concerning a thing about which he makes a judgement that it is, in its existence outside the mind, just as it is believed to be in the mind.” Truth, in turn, “is for the thing outside the mind to be as is believed of it by the mind.”⁵¹ Since one can assent to propositions which are not true, however, assent admits of degrees: certitude, the most perfect type of assent, is the goal of demonstration; approximate certitude is dialectical assent, and the psychological acquiescence (*sukūn al-nafs*) of the *mutakallimūn* is rhetorical assent, “the most remote assent from certitude.” Certitude itself is defined as follows:

And certitude is for us to believe concerning the truth to which assent has been given, that it is not at all possible for the existence of what we believe of this thing to be different from what we believe; and in addition to this, we believe concerning this belief that another [belief] than it is not possible, even to the extent that whenever there is formed some belief concerning the first belief, it is not possible in one’s view for it to be otherwise, and so on *ad infinitum*. And what is not certain is for us to believe, concerning that to which assent is given, that it is possible, or not impossible, that it be, in its existence, different from what is believed of it.⁵²

This definition reflects several of the criteria stipulated in the *Conditions*. Not surprisingly, the belief and truth conditions are present here, though they are not isolated in their own right. The necessity condition is reiterated in the claim that certitude involves the belief that things cannot be otherwise, and at the end of the passage it is established as the central characteristic distinguishing certitude from lesser epistemic states. In this text the knowledge condition is preceded by the necessity condition (the reverse order from the *Conditions*), and given special emphasis. Fārābī again identifies this condition as a type of “knowing that one knows,” and he continues to maintain that certitude requires the believer to possess, in addition to her first-order knowledge of a proposition, some second-order, reflexive knowledge of her own cognitive state.

Indeed, if a person is certain that p , she is able to generate a potentially infinite series of meta-beliefs about the truth of p , and her own belief that p is true.

The theme of opposition also resurfaces in this text as a means of differentiating certitude from the lesser cognitive states proper to dialectic and rhetoric. In this text dialectic and rhetoric are both identified as possible sources of merely “accidental certitude” which may result when one holds a true belief based on testimony (*al-šahāda*) alone, either that of all or most people (dialectic), or that of a special group or authority figure (rhetoric). As was the case in the *Conditions*, it is ultimately the lack of direct insight into the truth of a proposition that renders its certainty merely accidental.⁵³

The major terminological distinction between the *Conditions* and the *Epitome* is the substitution in the latter text of “necessary” (*darūrī*) for “absolute” certitude as the label applied to the epistemic result at which the demonstrative art aims. Necessary and absolute certitude nonetheless appear to be synonymous, since necessary certitude also includes the eternity condition, whereas non-necessary certitude extends to contingent truths as well:

Necessary certitude is to believe, concerning that which cannot be otherwise in its existence than it is, that it cannot be at all otherwise than it was believed [to be], not even at some time. And the non-necessary is what is certain only at some time. As for the necessary, it is not possible for it to change and to become false, but rather, it always exists in the way in which it arises in the mind, be it as a mere negation or as a mere affirmation. As for the non-necessary, it is possible for it to change and to become false without a defect occurring in the mind. Necessary certitude can only be attained in matters that are perpetual in existence, such as “The whole is greater than the part.” For this is something that cannot change. As for the non-necessary, it only occurs in what is mutable in existence, such as the certainty that you are standing, and that Zayd is in the house, and the like.... Necessary certitude and necessary existence are convertible in

entailment (*al-luzūm*), for what is ascertained as necessarily certain is necessary of existence, and the perfect certitude concerning what is necessary of existence is necessary certitude.⁵⁴

“Knowledge” (*‘ilm*), Fārābī later observes, is more appropriately said of necessary than non-necessary certitude. Hence, the term “certain knowledge” (*al-‘ilm al-yaqīnī*) is essentially a synonym for necessary certitude, especially as it applies to the conclusions of demonstrative syllogisms.⁵⁵

The most significant addition that the *Epitome* makes to the account of certitude in the *Conditions* is its more elaborate discussion of the non-syllogistic sources of certitude. Fārābī subdivides them into those that arise by nature—the first principles of the sciences—and those that arise from experience (*al-tağrība*).⁵⁶ While little is said in the *Conditions* about sensible certitude and empirical knowledge, the *Epitome* offers a brief account of experience. Both texts, however, share the same reliabilist stance on the certitude of syllogistic principles: both primary and empirical propositions are certain *per se*, and each is the product of a reliable method for acquiring knowledge.

RELIABILISM, CERTITUDE, AND THE PRINCIPLES OF KNOWLEDGE

Fārābī’s *Epitome of the Posterior Analytics* characterizes the first principles of knowledge as naturally certain, even though we aren’t aware of the origin from which their certitude derives. While it is customary to speak of these propositions as being “innate,” Fārābī does not make that exact claim, and indeed it would seem to be at odds with his acceptance of the fundamental tenets of Aristotelian psychology, in which the human material intellect is a pure potency in its own right.⁵⁷ What Fārābī does say is that we have no conscious awareness of when we acquired knowledge of these intelligibles, and that we can recall no time when we did not know them. But

he is careful to assert only that it “*as if* our souls possessed [this knowledge] by nature from the beginning of our existence, and as if it were innate in us and we were never lacking in it.”⁵⁸

Having characterized first principles in this fashion, Fārābī goes on to insist that the question of their origin is of no concern to the logician, since “the fact that we are ignorant of the manner of their attainment does not cause our certitude in them to cease, nor does it diminish it nor impede us from composing a syllogism from them which causes certitude for us as a necessary entailment from them.”⁵⁹ This is an obviously reliabilist position: the grounds and justification for one’s certitude do not need to be cognitively accessible to the knower herself—all that is important is *that* the first principles are known to be infallible and to provide the foundations for infallible, certain inferences.

Still, Fārābī does not seem to be entirely content to leave the matter of the justification of first principles as it stands. Perhaps he recognized that what we now call the externalism of the reliabilist—the claim that the grounds of her justification do not need to be cognitively accessible to the knower—clashes with the inclusion of an element of second-order knowledge or awareness amongst the criteria for certain knowledge. Hence he qualifies his claim by adding that while the *logician* need not provide an explanation as to why first principles are reliable sources of certitude, this is a topic that is subject to scientific and philosophical investigation at some other level:

The manner in which these primary knowables are attained is one of the things investigated in the sciences and in philosophy. And it is clear that we only reach certitude concerning the mode of their occurrence from syllogisms composed from the like of these premises. For if it were not verified or made known whence knowledge (*ma'rifa*) of them occurs and how it occurs, it would not be possible for us to use them in ascertaining anything at all. And if the modes of their occurrence are only made known from these

[premises], and it is not possible for them to be used in their own proof (*fī bayān-hā*), it would follow that one could not arrive at knowledge of anything at all. And for this reason whoever demands speculation concerning the modes of the occurrence of these premises in logic is in error. Rather, all that is necessary in this art is for us to acquire knowledge of them that characterizes, describes, and enumerates their varieties, and which makes known the manner of their use as parts of a syllogism, and shows how the other things that are known arise from them.⁶⁰

Fārābī's argument in this passage seems to be that the logician cannot prove the certitude of the first principles of the sciences, since that would render their justification circular. Nonetheless, it is important for us to establish the reliability of first principles in some science, otherwise we would not be justified in grounding any subsequent knowledge upon them. Still, Fārābī seems to admit that this legitimately raises some suspicion of circularity—we still seem to need to use the first principles in certifying the very conclusions of the other sciences, such as psychology, which investigate the origins of knowledge. His implicit rejoinder appears to be that this circularity is not vicious so long as it does not rely on logical principles, a point that is plausible if one accepts the Aristotelian assumption that each science has its own proper principles that are distinct from those of every other science.

Still, the problem of circularity does not seem to be fully resolved by such a response, especially in the case of the justification of immediate and common principles such as contradiction and the excluded middle. The most promising resolution is suggested by Fārābī's allusion to the *mode* in which the principles come about. If in the special sciences we are only concerned with the mode or manner in which the principles of knowledge arise, then we are not actually *justifying* or *proving* them to be true—something which is in any case logically impossible because of the immediate connection between their subject and predicate terms.

Nonetheless, ultimately we do need an account of the *source* of these principles and the conditions under which they arise in order to confirm our feeling of certainty about them, even if that account does not directly ground their certitude—just as we need a scientific account of the conditions under which we can trust our visual perceptions, even though we do not consciously advert to that account every time we accept the evidence of our eyes.

As we have already seen, Fārābī also includes “experience” as another non-syllogistic source of certain knowledge. While this is one of the few elements in the Fārābīan account of certitude on which the *Epitome* is more informative than the *Conditions*, the account of experience in the text is initially conflated with the account of how first principles are acquired. In summing up the argument that it is not up to the logician to explain how we know first principles, Fārābī remarks that “it is clear that the singulars of the majority of these universal premises are sensibles.”⁶¹ He then launches into a brief account of the sensible sources of universal knowledge, arguing that sensation is a necessary but not sufficient condition for the production of universals, and inferring from this that “it is clear that the soul possesses some activity regarding sensible things beyond (*azyād min*) our sensations of them.”⁶² With these remarks, Fārābī launches into a discussion of the distinction between induction, which is not a source of certitude, and experience, which is.

As I have already noted, Fārābī restricts the certitude of induction because by definition it remains on the level of the particular and extends only to those determinate individuals that the knower has actually sensed. Experience, by contrast, is universal, and it arises when “we have reached the point where we make a general judgement of the subjects of these premises that includes both what we have sensed and what we have not sensed.”⁶³ In general, Fārābī identifies experience as having the following characteristics that render its certitude absolute: it grasps *universal* propositions; it verifies those propositions *intentionally*; and this verification is on

account of the prior sensation of particular instances of the universal. Despite Fārābī's failure to demarcate the transition in his topic here, it is clear that the intentional verification of empirical propositions is what distinguishes them from natural first principles, which are assented to without any voluntary effort or investigation.⁶⁴ Nonetheless, the verification procedure in empirical knowledge is not syllogistic, as we have already seen. Moreover, while empirical knowledge for Fārābī rests on a prior sensation of particulars, it differs from induction precisely because its certitude surpasses the scope of what one has actually sensed. Hence, whereas inductive surveys must be exhaustive in order to be trustworthy—and even then they fail to attain certitude—experience may supervene on the sensation of any number of particulars, “be it a few or many of them,”⁶⁵ although Fārābī appears to believe that in practice experience usually requires an exhaustive or near-exhaustive examination of the particulars, as his definition suggests: “For experience is for us to scrutinize the particulars of universal premises [to see] if what is predicated of them is in each one of them, and for us to trace it in all or most of them until necessary certitude is attained by us. For this judgement is a judgement concerning all of this species.”⁶⁶ One differentiates experience from induction, then, not by any distinction in the way in which each is produced. Rather, the character of the judgement that arises in the knower by way of sensation, and whether or not it attains the maximum degree of certitude, is itself the primary criterion by which Fārābī differentiates induction from experience: “The soul is not confined in the case of these [empiricals] to the scope in which it has examined them, but rather, after examining them it forms a general judgement that comprises both what it has examined and what it has not examined.”⁶⁷

Fārābī's remarks on the certitude of experience and its distinction from induction will resurface in a more developed form in Avicenna's account of experience in his own

Demonstration and in his discussions of the epistemic status of empirical premises. While Avicenna will agree with Fārābī that it is not the logician's place to explain the mechanisms by which experience is produced, nor to enumerate the precise conditions under which it becomes certain, he will attempt to explain how experience attains the universal, a point on which Fārābī's account is frustratingly silent.⁶⁸ Nonetheless, Fārābī is the first in the Islamic philosophical tradition to articulate this reliabilist position with respect to both immediate first principles and empirical propositions. And later Islamic philosophers will agree with him that it is the resultant certitude itself, and not any arbitrary formula, that determines the universal and necessary status of empirical propositions.

CONCLUSION

While the move to differentiate certitude from knowledge may ultimately be the result of a mere whim on the part of the Arabic translator of the *Posterior Analytics*, that whim served as the occasion for al-Fārābī to introduce a number of innovative, if not entirely uncontroversial, ideas into Arabic philosophical discourse. Although it would be an exaggeration to claim that Fārābī's accounts of certitude in themselves represent a broadening of the traditional epistemological assumptions that the Islamic tradition inherited from the ancients, it remains true that Fārābī's reflections on the nature of absolute or necessary certitude and the criteria that it presupposes led him to formulate far more precisely than had previous philosophers the grounds for the restrictions placed on demonstrative knowledge and the problematic nature of those restrictions. The main result of such reflections seems to have been the recognition that our everyday, pre-philosophical intuitions about knowledge and certitude are not entirely groundless. This is not to say that Fārābī intended in any way to rehabilitate or legitimize the epistemic value of those forms of knowledge that he would have identified as dialectical, rhetorical, or poetic, at least not

for the philosopher as such. Fārābī remains an epistemological elitist, like most of the philosophers in his tradition. Nonetheless, Fārābī's recognition that the eternity condition is a criterion only for *absolute* certitude, and that we can legitimately claim to have *bona fide* certitude even of contingent truths, is a significant epistemological insight in its own right. While Fārābī's motivations are quite different from those of Latin philosophers in the late 13th and 14th centuries, the Fārābīan category of non-absolute certitude performs a function similar to their concept of intuitive cognition, whose aim is to provide an explanation of how we can have intellectual cognition of objects as present and existing, and thereby attain certitude in the case of contingent as well as necessary truths.⁶⁹

Fārābī's discussion of the conditions of certitude also represents one of the earliest explicit statements of the important though controversial principle that certitude is not merely a matter of how and what one knows, but that it also requires some form of knowing *that* one knows. Fārābī's stipulation that the knowledge condition applies to all forms of essential certitude, both absolute and non-absolute, is taken up by later Islamic philosophers as the identifying feature of certitude. Hence, Avicenna will echo Fārābī's articulation of this point when he declares, "Certitude is to know that you know, and to know that you know that you know, *ad infinitum*."⁷⁰

Amongst contemporary epistemologists, however, the requirement of "knowing that one knows" has come to be suspect precisely because that it expresses strongly *internalist* views about knowledge and justification which seem to be at odds with our everyday intuitions.⁷¹ Because it builds reflexive self-awareness into the very definition of certitude, "knowing that one knows" requires that we be explicitly aware of the grounds which justify our beliefs and able to articulate exhaustively our reasons for claiming to know whatever we know. Such an assumption is clearly present not only in Fārābī's knowledge condition itself, but also in his discussion of the

powerful weapon that certitude provides to the philosopher who is faced with opposition from the sophist and his ilk. But for these very reasons it undermines Fārābī's basic insight that some forms of certitude exist which are secure though not absolute.

Apart from their intrinsic difficulties, the strongly internalist assumptions captured in knowledge condition also seem to clash with the other main legacy of Fārābī's epistemology to the later philosophical tradition in Islam, and that is the introduction of reliabilism into the justification of both the *foundations* or *principles* of knowledge, and the *inferential methods* by which new knowledge is built upon the principles. Fārābī will again be followed by Avicenna and others in their sharp delineation of the logician's reliabilist perspective from that of the psychologist and metaphysician, and in their insistence that the latter's conclusions do not enter directly into the justification of any beliefs. Such reliabilist principles are important in establishing that sensible and empirical knowledge have a legitimate claim to certitude, and so they are closely tied up with Fārābī's rehabilitation of the certitude of contingent truths. But reliabilism is also the quintessential form of externalism, and thus fundamentally incompatible with the internalism expressed in the knowledge condition.⁷² This tension is perhaps one of the most intractable within the Fārābīan theory, and one that it is difficult to resolve without abandoning some fundamental tenet of Aristotelian epistemology. It is a tension that, together with their many insights and innovations, Fārābī's logical treatises were to bequeath to the later *falāsifa* for whom he was the Second Teacher.

Notes

¹ The Arabic text of the *Posterior Analytics* in the version of Abū Bishr Mattā is edited by A.R. Badawi in volume 2 of *Mantiq Aristū*, 3 vols. (Beirut-Kuwait: Wakāla al-Marbū'a, 1970).

² Both the *Kitāb al-burhān* and the *Šarā'it al-yaqīn* are edited by Majid Fakhry in vol. 4 of *Al-Mantiq 'inda al-Fārābī*, ed. R. Al-'Ajam and M. Fakhry (Beirut: Dar el-Machreq, 1986-87). In the case of the *Šarā'it al-yaqīn*, I have also consulted the earlier edition of M. Türker, "Fārābī'nin 'Šerā'it ul-yaqīn 'i," *Araştırma* 1 (1963): 151-228; unless otherwise indicated, references are to the Fakhry version of the *Conditions*. A number of passages from both the *Epitome* and the *Conditions* are translated into French and discussed by Georges Vajda, "Autour de la théorie de connaissance chez Saadia," *Revue des études juives* 126 (1967): 375-97.

³ *Ra'y*, rather than *ẓann*, is often treated as the Arabic equivalent of *doxa*, but both the Arabic text of *Posterior Analytics* 1.33 and Fārābī's *Conditions* use *ra'y* as a more general term embracing both *doxa* and *epistēmē*. See below at n. 8.

⁴ Jonathan Barnes, *Aristotle's Posterior Analytics* (Oxford: Clarendon, 1975), p. 3.

⁵ Perhaps Abū Bishr was attempting to convey the etymological associations of the Greek *sullogismos* with the term for a collection or assembly, *sullogē*, as a way of differentiating *qiyās* as a philosophical term for the syllogism from its *kalām* counterpart, a technical term for analogical reasoning. *Al-qiyās al-mu'talaf* would then be a deductive philosophical argument composed from two premises, whereas *al-qiyās* without qualification would be a theological argument based on analogy or inference from the apparent to the hidden.

⁶ *Conditions*, p. 98.1-4.

⁷ Much discussion of the “traditional” definition of knowledge takes as its starting point the critique of that definition by Edmund Gettier, “Is Justified True Belief Knowledge?” *Analysis* 23 (1963): 121-23. Gettier and other contemporary analytic philosophers trace the tripartite definition back to Plato’s *Theaetetus* and *Meno*, although the contemporary understanding of justification is considerably weakened from its Platonic origins.

Throughout this article I will occasionally attempt to categorize Fārābī’s views on certitude according to some of the fundamental distinctions within contemporary epistemology, many of which have arisen as responses to the so-called Gettier problem. The main distinction I will employ is one between internalist and externalist theories of justification. “Internalism” is generally defined in terms of cognitive accessibility—the knower is introspectively aware of the reasons why her beliefs are justified. By contrast, “externalism” allows that the knower may be justified in her beliefs even if she does not have access to all of the grounds that justify them. For representative recent accounts of these distinctions, see William P. Alston, *Epistemic Justification: Essays in the Theory of Knowledge* (Ithaca: Cornell University Press, 1989), pp. 2-6; and Robert Audi, *Epistemology: A Contemporary Introduction to the Theory of Knowledge* (London and New York: Routledge, 1998), pp. 214-47. The principal externalist theory of justification is “reliabilism,” which argues that beliefs are justified if they are produced by a reliable process, whether or not the believer herself is aware of or understands the process. The classic formulation of the reliabilist position can be found in Alvin Goldman, “Discrimination and Perceptual Knowledge,” *Journal of Philosophy* 73 (1979): 771-91.

⁸ *Manṭiq Aristū*, vol. 2, pp. 322-26.

⁹ Fārābī, *Conditions*, §2, p. 98.8-10.

¹⁰ *Ibid.*, §2, p.98.11-19.

¹¹ This passage follows the first paragraph of Fārābī's account of the knowledge condition.

Fakhry (§3, pp. 98.22-99.12) does not recognize it as an interpolation, and simply runs it into the main argument. Türker (pp. 196.8-197.2) offsets it by dashes to indicate its status as an interpolation. It appears to be a marginal gloss on the meaning of "correspondence" (*muṭābaqa*) that has been inserted into the main text itself, and hence it may not be part of Fārābī's own account.

¹² *Conditions*, §3, pp. 98.22-99.2.

¹³ *Ibid.*, §3, p. 99.2-7.

¹⁴ *Ibid.*, §3, p. 99.8-12.

¹⁵ See n. 8 above for the reference to the Arabic text.

¹⁶ Cf. *Epitome*, chap. 1, p. 19.7 where *ma'rifa* is used as a generic term covering conceptualization (*taṣawwur*) and assent (*taṣdīq*). For this seminal distinction in Arabic logic and epistemology, see D.L. Black, *Logic and Aristotle's "Rhetoric" and "Poetics" in Medieval Arabic Philosophy*, (Leiden: Brill, 1990), pp. 71-78, along with the literature referred to on p. 71 n. 54.

¹⁷ It is at this point that the interpolation on the nature of correspondence (see n. 11 above) occurs. The ellipsis marks this interpolated passage.

¹⁸ *Conditions*, §3, pp. 98.20-22; 99.12-17.

¹⁹ The use of second-order beliefs to differentiate knowledge from opinion is also implicit in Aristotle: “In addition, no one thinks that he opines when he thinks that it is impossible for it to be otherwise, but that he knows; but when <he thinks> that it is so but that nothing prevents it <from being> otherwise, then <he thinks> he opines. . .” (*Posterior Analytics* 1.33, 89a7-9; Barnes p. 50, substituting “knows” for “understands”).

²⁰ See above at n. 16 for literature on this distinction.

²¹ See *De anima* 2.5, 417b9-28. Whether or not Aristotle intended the account of intellectual powers and operations in the *De anima* to apply to propositions as well as concepts, the Arabic commentary tradition on the *De anima* assumes that the text is primarily concerned with describing the process by which simple concepts are acquired, at least as far as the account of the intellect up to *De anima* 3.5 is concerned. This assumption may derive from the fact that the Arabic version of the text most commonly used by the *falāsifah* translates τὸ νοεῖν as *taṣawwur bi-al-‘aql*—“intellectual *conceptualization*”—and thus implicitly evokes the *taṣawwur-taṣdīq* distinction. Though the text of this Arabic version of the *De anima* is not extant, its terminology is reflected in Averroes’s *Middle Commentary on Aristotle’s De anima*, ed. and trans. Alfred Ivry, (Provo, Utah, 2002); see, for example, the lemma for 3.4, 429a13.

²² *Conditions*, §3, p. 99.18-23.

²³ *Ibid.*, §4, p. 100.1-6.

²⁴ *Ibid.*, §5, p.100.8, emphasis added.

²⁵ *Ibid.*, §5, p.100.7-9.

²⁶ Avicenna, *Al-Šifāʾ: Al-Ilāhīyāt*, ed. G. C. Anawati, S. Dunya, M. Y. Musa, and S. Zayid, 2 vols. (Cairo: Al-Hayʾah al-Miṣrīyah al-ʿAmmah li-al-Kitāb, 1960), Bk. 1, chap. 5, p. 36.4-6.

²⁷ For “existential” (*wuġūdī*) or “absolute” (*muṭlaq*) propositions in Fārābī, see *Falsafa Aristūṭālis*, ed. Muhsin Mahdi (Beirut: Dar Maġallat Šiʿr, 1961), §5, p. 73.12-15; trans. M. Mahdi, *Alfarabi’s Philosophy of Plato and Aristotle* (New York: Free Press of Glencoe, 1962), p. 83; *Kitāb al-ʿibāra (Epitome of Aristotle’s De interpretatione)*, ed. R. Al-ʿAjam, in vol. 1 of *Al-Manṭiq ʿinda al-Fārābī*, chap. 7, p. 157.17-19; trans. F. W. Zimmermann, *Al-Farabi’s Commentary and Short Treatise on Aristotle’s “De interpretatione”* (Oxford: Oxford University Press, 1981), pp. 242-3. The distinction between necessary, possible, and existential modes derives from *Prior Analytics* 1.2, 25a1-2. On this point see Zimmermann, p. 57, n. 1; and Joep Lameer, *Al-Fārābī and Aristotelian Syllogistics* (Leiden: Brill, 1994), pp. 55-62.

²⁸ *Conditions*, §5, p. 100.9-17.

²⁹ Fārābī again appears to foreshadow Avicenna here. His claim that one has necessary yet *temporal* knowledge of the occurrence of an eclipse has some interesting affinities to Avicenna’s use of the eclipse to illustrate the sort of particular proposition that God can know “in a universal way” (*ʿalā naḥw kullī*). See *Šifāʾ: Ilāhīyāt*, Bk. 8, chap. 6, pp. 359.12-362.3.

³⁰ See n. 27 above regarding existential propositions.

³¹ *Conditions*, §6, p.100.18-20.

³² Cf. the passage cited at n. 28 above.

³³ *Ibid.*, §6, p.100.20-22.

³⁴ *Epitome of Posterior Analytics*, chap. 1, pp. 20.22-21.1; p. 25.1-3.

³⁵ *Conditions*, §6, pp.100.23-101.1.

³⁶ *Ibid.*, §6, p. 101.1-6.

³⁷ For a discussion of this point and references to relevant texts in Fārābī and later *falāsifa*, see Black, *Logic and Aristotle's "Rhetoric" and "Poetics"*, pp. 138-52.

³⁸ *Conditions*, §6, p. 101.7-12.

³⁹ The topic of opposition occupies Fārābī's attention throughout *Conditions*, §§8-10, pp.102.8-103.22.

⁴⁰ *Ibid.*, §7, p. 102.5.

⁴¹ *Ibid.*, §7, p. 102.5-7.

⁴² *Ibid.*, §8, p. 103.3-10. Fārābī is somewhat vague here, but I take it this is to be understood collectively of the set of premises and the inference concluding to not-*p*, since nothing would prevent some true premises from being included in an argument that concludes to a falsehood.

⁴³ *Ibid.*, §8, p. 103.3-4.

⁴⁴ *Ibid.*, §8, p. 103.7-8.

⁴⁵ *Ibid.*, §9, p. 103.11-18.

⁴⁶ *Ibid.*, §10, p. 104.11-12.

⁴⁷ *Ibid.*, §10, p. 104.6-8.

⁴⁸ *Ibid.*, §10, p. 104.15-17.

⁴⁹ *Ibid.*, §10, p. 104.13-15.

⁵⁰ *Ibid.*, §3, p. 99.12-16.

⁵¹ *Epitome of Posterior Analytics*, chap. 1, p. 20.2-6.

⁵² Ibid., chap. 1, p. 20.11-15.

⁵³ Ibid., chap. 1, pp. 20.14-20; 21.4-12.

⁵⁴ Ibid., chap. 1, pp. 21.15-22.1; 22.4-6.

⁵⁵ Ibid., chap. 2, p. 25.14-15.

⁵⁶ Ibid., chap. 2, pp. 23.3-25.9.

⁵⁷ See Aristotle, *De anima* 3.4, 429a18-25; 429b29-30a1. Compare Fārābī, *Risāla fī al-'aql*, ed. Maurice Bouyges (Beirut: Imprimerie Catholique, 1948), pp. 12.4-15.5; English translation in A. Hyman and J. J. Walsh, eds., *Philosophy in the Middle Ages*, 2d ed. (Indianapolis: Hackett, 1973), pp. 215-16.

⁵⁸ *Epitome of Posterior Analytics*, chap. 2, p. 23.4-8.

⁵⁹ Ibid., chap. 2, p. 23.9-11.

⁶⁰ Ibid., chap. 2, pp. 23.11-24.5.

⁶¹ Ibid., chap. 2, p. 24.7-8.

⁶² Ibid., chap. 2, p. 24.14. Fārābī then reasserts the disclaimer that “even if this can be proven, it is difficult to do so in this subject. So let us leave this aside and limit ourselves in their case to the degree which is appropriate to its nature [i.e., that of logic]” (p. 24.14-16).

⁶³ Ibid., chap. 2, p. 24.12-13.

⁶⁴ Ibid., chap. 2, p. 24.17-19. The idea that the inference of secondary intelligibles is in some way intentional (*'an ta'ammud*) and subject to the individual will is later reflected in the distinction between natural and voluntary intelligibles put forth by Averroes. See *Averrois Cordubensis*

commentarium magnum in Aristotelis de anima libros, ed. F. S. Crawford (Cambridge, MA: The Medieval Academy of America, 1953), p. 496.490-98.

⁶⁵ *Epitome of Posterior Analytics*, chap. 2, p. 24.19.

⁶⁶ *Ibid.*, chap. 2, p. 24.19-21.

⁶⁷ *Ibid.*, chap. 2, p. 25.5-6.

⁶⁸ Avicenna discusses empirical knowledge in a number of places. The most extensive account is in the *Demonstration of the Healing*, Bk. 1, chap. 9. See *Al-Šifā: Al-Burhān*, ed. A. E. Affifi and I. Madkour (Cairo: Al-Hay'ah al-Miṣrīyah al-'Ammah li-al-Kitāb, 1956), pp. 93-98. Avicenna's main innovation is to attribute the universalization of empirical knowledge to a latent syllogistic inference which the mind unconsciously performs (pp. 96.12-98.3). Cf. *Al-Išārāt wa-al-tanbīhāt*, ed. Jacques Forget (Leiden: Brill, 1892), pp. 56.17-58.4, where Avicenna repeats Fārābī's disclaimers regarding the role of the logician in establishing the veracity of these and related propositions. For an English translation of this text, see S. C. Inati, *Remarks and Admonitions Part One: Logic* (Toronto: Pontifical Institute of Mediaeval Studies, 1984), pp. 120-121.

⁶⁹ The influential distinction between intuitive and abstractive cognition is usually traced back to Duns Scotus. For a basic sketch of this distinction see *Ordinatio* Bk. 2, d.3, *pars secunda*, q.2, nn.318-23, in *Opera omnia studio et cura Commissionis Scotisticae ad fidem codicum edita praeside Carolo Balić* (Vatican City: Typis Polyglottis Vaticanis, 1950-), 7: 552-54; for the application of the distinction to the problem of certain knowledge of contingents, see *Ordinatio* Bk. 3, d. 14, q. 3, in *Opera omnia*, ed. L. Wadding, 26 vols. (Paris: Vivès, 1891-95), 14: 524-25; 527-8); on intuitive cognition, self-knowledge, and knowing that one knows, see *Quaestiones*

quodlibetales, q. 6, a. 1, nn.7-8 (ed. Vivès, 25: 243-44); English translation by F. Alluntis and A. B. Wolter, *God and Creatures: The Quodlibetal Questions* (Washington, D. C.: Catholic University of America Press), 1975, pp. 135-137. For other texts and an overview of the development of Scotus's account of intuitive cognition, see Allan Wolter, "Intuition, Memory, and Knowledge of Individuals," in idem, *The Philosophical Theology of John Duns Scotus*, ed. M. M. Adams (Ithaca: Cornell University Press, 1990), pp. 98-122.

⁷⁰ Avicenna, *Al-Ta'liqāt (Notes)*, ed. A. R. Badawi (Cairo: Al-Hay'ah al-Miṣrīyah al-'Ammah li-al-Kitāb, 1973), p. 79. Avicenna then relates this claim to the specific problem of self-knowledge: "The perception of one's essence is like this. For you perceive your essence, and you know that you perceive it, and you know that you know that you perceive it—*ad infinitum*."

⁷¹ For a concise statement of the objections to this thesis and their link to the development of reliabilism, see Michael Williams, *Problems of Knowledge* (Oxford: Oxford University Press, 2001), pp. 31-32.

⁷² Reliabilism and internalism are sometimes combined by moderate foundationalists, but not to justify the same propositions. That is, moderate foundationalists may be reliabilists about the *principles* of knowledge, but internalists about inferences based on the principles. But since Fārābī's six conditions apply equally to syllogistic and non-syllogistic forms of certitude, his theory cannot escape these tensions by this route.