



High-Voltage Epistemology: Understanding Islamic Theories of Knowledge via Epistemic 'Signal Flow'

ASIPT Curricular Essay Series

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A preliminary note to readers

The essay before you is a preliminary exploration of a model of epistemology as outlined in the logical, theological, hadith, and legal works of the classical Islamic intellectual tradition. Epistemology is a universal science in that it should describe how humans come to know regardless of whether or not they have been reached by Divine revelation and whether or not they have accepted it if it has reached them. However, when Muslims write about epistemology, they affirm that the truthfulness of the Allah's messenger Muḥammad ﷺ has been established through universal epistemological methods, and as such, they construct descriptions of this methodology with terminology that begins with the acceptance of that fact of revelation. Were one to imagine this methodology without reference to the epistemological channel of "the truthful reporter aided by miracles" the primary adjustment would be to the epistemological channel of the soul and the spiritual knowledge that it obtains (premonitions, true dreams, etc.). In that case, one might subsume soul, self, mind, and intellect under the channel of the mind-qua-brain or some other union of mental and spiritual perceptions, such that the system described below might be useful for one whose anthropology and psychology include only the senses and the intellect. However, for Muslims, the tripartite body-mind-soul description of the human being serves as a coherent and justified model of the three main channels through which humans come to know.

The metaphorical model chosen to explore traditional Islamic epistemology is clearly anachronistic and as such would not be recognizable to premodern Muslim scholars. However, it will likely prove useful for contemporary scholars and students who might benefit from a few simple categories to organize the variables of epistemology around. The subject is rich with possibilities, and in writing and researching this series of essays it became clear that our attempt to represent a coherent theoretical and practical model of Islamic epistemology is merely a preliminary yet robust attempt. It is hoped that future students and scholars will both discover already extant discussions of these topics in the copious and underserved manuscripts and books of the great scholars of the past millennium as well as contemplate, parse, and present more of the subtle details of the process of human knowledge obtainment.

An earlier version of this essay informed our main essay *An Applied Epistemology, General and Religious* and now incorporates some of that material back into this one. It also touches on material found in our other essay, *An Epistemology Overview of Textual Sources*. Some differences in terminology and translation may be noticed, but the analysis and method are unified across the three essays. The purpose of this essay is primarily informative and demonstrative. It gives the reader a sense of the relationship between objects of knowledge, the epistemic channels through which they are perceived, and willful belief in the knowing-self. Despite the largely descriptive approach taken herein, the goal of studying epistemology is, however, to know things as they truly are.

Introduction

Some knowledge comes from within, be it a conception in the mind of a single meaning—'tree', 'cat', or 'lunch'—or a composite of conceptions, whether a definition ('rational animal'), a proposition ("A square has four angles"), or an assent to the veracity of a proposition ("It is true that 'a square has four angles'"). One might also draw to mind a mental image of any of the above concepts, such as visualizing a cat in the mind's eye. Sometimes, conceptions, assents, mental images, or even spiritual visions of realities in the extramental world occur without effort in one's knowing-self (*nafs*), and new knowledge might be obtained. Other knowledge

comes from sensory perceptions of objects of knowledge that exist outside the mind and that knowledge reaches the knowing-self via a process that includes the intellect, thereby producing judgments or assents.

While reducing all such knowledge obtainment to a physical metaphor may not fully represent important aspects of the spiritual psychology of how humans come to know, for the sake of simple demonstration of epistemic 'signal flow', we can describe the process of knowledge obtainment through the metaphor of voltage. Just as the voltage emitted by an object, such as a battery or wall outlet, can be accurately measured via a voltage meter, so long as all of the sensors and wires leading from the object to the meter as well as the circuits within the meter are working properly without impediments, so too can the epistemic signal flow from objects of knowledge via the senses and intellect to the knowing-self be envisioned. Likewise, the mind's movement through known mental objects of knowledge in the form of conceptions, propositions, or assents in order to obtain previously unknown conceptions, propositions, or assents via definitional or syllogistic reasoning can also be metaphorically represented via this useful analogy of signal flow and voltage.

Key Concepts in High-Voltage Epistemology

Several key concepts should be understood in order to understand the analogy of high-voltage epistemology that aims to explain the "epistemic signal flow" from objects of knowledge to belief in the knowing-self. They are briefly introduced below and then applied in what follows, while further details can be found in the essays entitled *An Applied Epistemology, General and Religious* and *An Epistemology Overview of Textual Sources*.

- 1) *Objects of Knowledge* are the extramental sensory objects (sensibilia), mental conceptions and assents (intelligibilia), or spiritual perceptions with which our epistemic channels interact and thereby obtain new knowledge. Sensory objects are perceived via the senses. Rational objects are perceived by the intellect. Spiritual objects are perceived by the soul, that aspect of the self that experiences spiritual states, true dreams, spiritual intuitions, and the like.
- 2) *Epistemic Charge*: Objects of Knowledge have *essential properties*—such as the meanings of words or the hotness of fire—and *non-essential properties*—such as cultural contextual variables with regard to the meaning of a statement, as discussed below. Objects of knowledge can be described as having an 'epistemic charge', analogous to the voltage in a wall outlet or battery. The essential and non-essential properties of objects of knowledge constitute their epistemic charge.
- 3) *Objective Value*: Analogous to a 120-volt or 220-volt wall outlet, some objects of knowledge have a very strong epistemic charge, while others have varying degrees of weaker charge. We can evaluate the strength of an object of knowledge's charge and assign it an *Objective Value*. For example, a text that produces 100% certainty in its veracity, interpretation, and ascription can be assigned the objective value of 'absolute'. Texts which do not reach this level, but incline towards veracity, shared interpretation, and/or ascription can be assigned the value of 'probabilistic'.
- 4) *Epistemic Signal*: An object of knowledge has a variety of essential and non-essential qualities that serve as the epistemic charge, measured at a particular objective value, which is emitted as an epistemic signal to be received by the epistemic channels described below. This epistemic signal might be the heat of a particular flame, the meaning of a specific word, the signification of a street sign, or combinations of conceptions that when considered together produce a definition or a proposition, to name but a few. In some cases, we might consider only one epistemic signal, such as the heat of fire, while in others we might consider multiple qualities (size, shape, color, etc.) that when taken together produce a single signal, such as the command to stop signified by a stop sign.

- 5) *Epistemic Channels*: A voltage meter has wires that connect to the voltage-producing object and transmit the current to the meter that measures that voltage. Similarly, there are three epistemic channels that can function individually or together with one or more other channels in order to transmit the epistemic charge of the object of knowledge to the knowing-self:
 - a. Properly functioning senses, internal and external.
 - b. Properly functioning intellect. In some cases, prerequisite knowledge and experience are required for the intellect to properly assess a proposition.
 - c. The soul, which is that aspect of the knowing-self that experiences spiritual knowledge not obtained by the senses nor the intellect's functions.
- 6) *Epistemic Signal Flow*: We can trace a sort of epistemic flow from objects of knowledge to the knowing-self. In some cases, there are multiple steps and multiple channels. For example, fire is a tactile sensory object that is first perceived via the sense of touch, then may or may not be assessed via the intellect. If it is, then the intellect might assent to the proposition "This fire is hot," which is a truth that is now known to the knowing-self. Or the intellect might assent to some other proposition such as "This calls for marshmallows!" which is more so a preference than a knowable truth. Our epistemic signal flowed from the sensory object, through the first channel of the sense of touch, then through the second channel of the intellect for assessment, then to the knowing-self. This is assentive knowledge that relies on sensory knowledge. Other instances of assentive knowledge can be obtained via the intellect alone, without reliance on sensory knowledge, through mere contemplation of the meanings of terms, such as "All squares are polygons." However, if the intellect did not engage with the initial knowledge obtained via the physical sense of touch, and instead the knowing-self came to know the hotness of that particular fire immediately via sensory experience, this is pre-conceptual sensory knowledge. Other examples of epistemic signal flow can be deduced from those mentioned above.
- 7) *The Intellect's Modes of Knowledge Obtainment*: There are multiple ways in which the intellect in particular performs its task in the obtainment of new knowledge. These ways or modes of obtainment include definitional conception (i.e., human: a rational animal) and various forms of assentive knowledge. Assentive knowledge can be obtained through various forms of immediacy (i.e., mere conception of the subject and predicate of a proposition, single experience of external sensation, causal association, etc.) or via reflective syllogistic reasoning (i.e. "Socrates is a man, all men are mortal, Socrates is mortal"). In addition to forming syllogistic arguments which are forms of deductive reasoning, the intellect also obtains knowledge through inductive reasoning and analogy. Modes of obtainment are connected to the entailed strength of conviction reached by the intellect as some forms of knowledge obtainment may produce certain or probabilistic knowledge, while others may only produce probabilistic knowledge. For example, an incomplete inductive survey only produces probabilistic knowledge, whereas a complete inductive survey produces certainty.
- 8) *Entailed Strength of Conviction*: When the intellect is involved in the knowledge obtainment process, specifically in assessing the veracity and degree of confidence in a proposition's claim, the assessment that it produces is the *Entailed Strength of Conviction*, that is, the entailed confidence level obtained via the intellect regarding the likelihood that a proposition is true or false. There are additional conditions that affect the level of conviction entailed by the objective value of a given object of knowledge, including being perceived via the appropriate epistemic channel, the soundness of the intellect, and proper knowledge of relevant contextual variables.

- 9) *Belief*: Belief, in its more particular meaning used herein, is the psychological experience of knowledge, which may or may not align to the assessment of the intellect or the perception of the senses. It is the experienced confidence level regarding the likelihood that a proposition is true or false or the likelihood that one's senses are perceiving a phenomenon correctly. Beliefs may be passive or active, the latter being described as the willful belief in, denial of, or noncommitment to the intellect's assessment. (Note: belief as described here is different from the technical meaning of *īmān*.)
- 10) *Warranted Belief*: When the willful belief, denial, or noncommitment corresponds to the intellectually entailed strength of conviction, such belief would be called "warranted." When it does not correspond, it is called "unwarranted." (Note: warrant as used throughout this essay is different from its technical usage in analytic philosophy.)
- 11) *Modality*: Propositions contain an implied or stated modality, meaning that the judgment is either necessarily, impossibly, or possibly the case. With that, there are three modal judgments: necessity, impossibility, and possibility.
- 12) *Modal Standards*: The three modal judgments are assessed either due to the intrinsic reality of the subject and predicate in a given proposition, or due to some extrinsic factor. Modal judgments that are based on the intrinsic reality of a proposition's subject and predicate are of the *rational* modal standard. As for modal standards assessed according to some extrinsic factor, when the modal judgment in a given proposition is based on the predictable and customary cause and effect relationship observed in the natural world, they are of the *nomic* (or *empirical*) modal standard. When revealed truth is the basis of a given modal judgment of necessity, impossibility, or possibility, then such judgments are of the *revelational* modal standard. When something is declared necessary, impossible, or possible based on human convention—such as the rules of chess, cultural norms, or institutional policies—then these are of the *human conventional* modal standard. Rational modal judgments are intrinsic. Nomic, revelational, and human conventional modal judgments are based on extrinsic properties, while also being intrinsically rationally possible.

Objective Value: Measuring the Epistemic Charge of Objects of Knowledge

Objects of knowledge have an epistemic charge, meaning that they have inherent essential properties as well as non-essential yet connected properties that play a causal role in our obtainment of knowledge of those objects. The hotness of fire is an essential property that causes experiential and pre-conceptual knowledge of that hotness when perceived with the sense of touch. With regard to propositional knowledge, a transmitted report has certain non-essential yet connected properties that impact our understanding as well as intellectual assessment of its veracity and attribution of the proposition contained within the report. These non-essential properties include contextual variables, such as reliability of transmitters, lexical and metaphorical meanings of words, cultural assumptions according to time, place, and population, to name a few. While one's interaction with some objects of knowledge may lead to immediate experiential knowledge that is beyond doubt, other objects of knowledge have additional variables that impact the directness, speed, or process of knowledge obtainment, as well as the level of conviction in the believability of a proposition.

These essential and non-essential properties impact how objects of knowledge are perceived via their relevant epistemic channels, and as such, whenever the intellect is involved in the process of knowledge obtainment, the properties of these objects will impact the intellect's assessment. Among the most important roles the intellect plays with regard to propositional knowledge is assessing the probability that claims and

interpretations are correct, as well as the accuracy of historical ascription when relevant. We can view the ability of the intellect to properly assess a proposition with regard to its mode of knowledge obtainment (immediate, reflective, deductive, inductive, etc.); however, we can also view the intellect's ability through the lens of the causal role that the properties of objects of knowledge play in that process. In particular, we can categorize objects of knowledge according to the level of conviction or confidence that their properties produce when perceived through the appropriate epistemic channels. We can call this the *Objective Value* of the object of knowledge. The objective value is akin to the voltage level of an object, and the level of conviction it produces is like the meter-reading on a voltage meter. The voltage meter, in this analogy, is the intellect. Our goal is to identify which types of propositional knowledge have a metaphorical voltage or epistemic charge that produces meter readings such as certain, probable, doubtful, improbable, or non-credible when perceived by the intellect qua voltage meter. We will call this metaphorical voltage level within the object the *Objective Value*, and the levels registered by the meter the *Entailed Strength of Conviction*—since that strength of conviction is entailed by the objective value and the presence of other conditions for sound reasoning.

Some objects of knowledge produce higher levels of conviction in the knower—such as certainty or denial—and therefore it is helpful to be able to rank the objective value of different objects of knowledge. That is to say, for example, fire is a tactile sensory object and through the epistemic sensory channel of touch we can obtain absolute certainty that ‘this particular fire is hot’ by holding our hand near the flame. Dark billowy shapes on the horizon are visual sensory objects, and through the epistemic sensory channel of sight we can be certain that something dark and billowy is there, but our inability to distinguish absolutely between a rain cloud and plume of smoke entails only probable conviction or supposition. In the first case, the objective value of that particular fire was very high in that one experiencing it could gain absolute certainty that that particular fire was hot. As for the smoke on the horizon, while it produced certainty in the viewer that something dark and billowy was there, its objective value in terms of the viewer's ability to identify its essential reality (i.e., cloud or smoke) was lower.

A survey of the objective value of all kinds of objects of knowledge—rational, sensory, spiritual—is beyond the scope of this essay; however, explaining the objective values of “transmitted assigned signficatory sensory objects” (i.e., texts, statements, etc.) is crucial for an understanding of Islamic Epistemology and can be used as a guide for exploring the objective value of other objects of knowledge.

Evaluating the Objective Value of Transmitted Reports: Absolute and Probabilistic Signification and Transmission

In addition to being true or false, texts have two very important additional elements to them, as mentioned previously. The first is whether or not we can understand them, and the second is whether or not we can attribute them to their original speaker. With that, we are concerned with their *signification* and *transmission*.

Signification

A text's ability to signify meaning can be divided into at least two objective values, absolute and probabilistic:

- 1) Absolute in signification (*qaṭʿī al-dalāla*)
- 2) Probabilistic in signification (*ẓannī al-dalāla*)

A text which signifies the intended meaning absolutely is one which produces certainty in the reader or hearer that they have understood the meaning exactly as the speaker intended. These are texts that can only be interpreted in one way and there is no room for other interpretations. “There is no god except Allah” signifies absolutely that Allah is the only god. We may need to define our terms (Who is Allah? What is a god?), but the phrase signifies absolutely that “god” can only be predicated of “Allah.” In the greater context of the Qur’an, both terms become clearer, and the meanings of the terms “god” and “Allah” are then signified absolutely.

A text which signifies a meaning whose interpretation is not absolute has a probabilistic objective value. That is to say, the reader or listener’s confidence level regarding their ability to understand the intended meaning of the speaker is less than 100%. For example, consider the following passage from the Qur’an regarding the waiting period for a divorced woman before she can remarry: “Divorced women shall wait concerning themselves for three monthly periods (*thalāthata qurū’in*)...” (2:228). We cannot have absolute certainty that the waiting period for a divorced woman is three periods of menstruation—according to the Ḥanafī school of law—or three periods of purity between menstruation—according to the Shāfi‘ī school—though we can have certainty that the scope of possibilities is limited (i.e., there is no interpretation of the waiting period as being a duration of five years or ten months or the like).

Transmission

The reliability of the ascription or attribution of a text to its speaker is also divided into the same two objective values of absolute and probable:

- 1) Absolute in transmission (*qaṭ‘ī al-wurūd*)
- 2) Probabilistic in transmission (*ẓannī al-wurūd*)

A text that has been mass-transmitted can be attributed to its speaker with absolute certainty. For example, the Qur’an has been mass-transmitted, and we can therefore ascribe its original recitation to the Prophet Muhammad ﷺ. That the Qur’an is revelation from Allah is known via the combined epistemic channels of the intellect and the ‘truthful report’, in particular “the report of a Prophet aided by miracles.” Some hadiths are also mass-transmitted, and therefore they can be absolutely ascribed to the Prophet Muhammad ﷺ. Other hadiths do not reach the level of mass-transmission and as such are considered probabilistic in their transmission. Some may produce a level of conviction in their ascription to the Prophet Muhammad ﷺ that reaches 99%, while others produce levels that are less than this. Our conviction levels can be with regard to *accuracy in reporting*—we are or are not reasonably confident that we are reading or hearing the actual wording that was spoken by the speaker—or they can be with regard to *attribution*—we may or may not be confident that a particular statement was actually spoken by the speaker. With that, scholars of hadith have developed the ranking system for those hadiths that are not mass-transmitted, which includes rigorously authenticated (*ṣaḥīḥ*), sound (*ḥasan*), weak (*da‘īf*), and fabricated (*mawḍū‘*). The particulars of this ranking system are touched on in *An Epistemology Overview of Textual Sources* and the standard works on hadith methodology.

In summary, texts can be absolute or probabilistic in their transmission and absolute or probabilistic in their signification. Therefore, the following four combinations are possible:

- 1) *Absolute in transmission, absolute in signification.* This is the highest objective value for a text. We have absolute certainty in the attribution of the text to its speaker, the accuracy in reporting, and in our ability to understand the text as it was intended.
- 2) *Absolute in transmission, probabilistic in signification.* We can trace this with certainty to its speaker, but there is a possibility for variance in interpretation.
- 3) *Probabilistic in transmission, absolute in signification.* There is a possibility that we have received the text with inaccuracies in wording and/or misattribution to its presumed speaker, but the text itself only allows one interpretation.
- 4) *Probabilistic in transmission, probabilistic in signification.* We may have misattributed or misquoted this text, and we may have misunderstood it. It is important to keep in mind that confidence levels for texts that are probabilistic in transmission and/or signification may still be quite high (i.e., up to 99%), so we can still consider this to be a type of knowledge called probabilistic knowledge (*ẓann*), so long as its probability of accuracy in wording, attribution, and interpretation is between 51%-99%.

The objective value of a report is either absolute—meaning that it is certainty-producing in the intellect of the one who hears it, understands it, and knows its relevant contextual information—or it is probabilistic—meaning that the intellect of the one who receives the report assesses the likelihood of accuracy to be between 51%-99%. In Islamic Epistemology, texts are one of the most important epistemic objects whose objective value is necessary for the scholar to know. However, in the realm of derived Islamic law (*fiqh*), for example, the objective value of a particular substance with regard to the probability of causing harm would impact the entailed strength of conviction of the jurist regarding the permissibility of consuming that substance. For example, if the substance is cyanide, then its harmful effects are known with certainty, either through direct experience or truthful reports. Unless there are people who are immune to cyanide's effects, then being poisonous to all humans is an essential property of cyanide that produces certainty in the jurist who can then rule that its consumption is not permissible. If, however, the substance is peanut butter, being poisonous to all humans is not an essential property, but being poisonous to some humans is. With that, the jurist can rule that its consumption is permissible, unless one is allergic to the extent that it would cause severe harm or death.

Entailed Strength of Conviction

When discussing the objective value of a textual report we saw that whether it could impart certainty or preponderant conviction impacted our confidence in its believability. This confidence in whether a report should be accepted as true without doubt or with some degree of allowance for the possibility that it might be inaccurate, misattributed, or misunderstood is a result of the listener's or reader's intellectual assessment of the probability of the report's correctness. That is, whenever the intellect passes judgment on a proposition related to some object of knowledge, the judgment or assessment of the proposition will either be absolute—meaning that it is certainly true—or not. We have discussed the intellect's judgment of the probabilistically correct proposition previously, and in what follows we will parse additional levels of conviction assessed by the intellect to be below the preponderantly probabilistic.

The level of confidence or conviction that is entailed by the objective value, when perceived via the appropriate epistemic channel, assessed by the sound intellect, and in accordance with proper knowledge of relevant contextual variables is what is called herein the *entailed strength of conviction*. It is entailed because when the intellect and senses are sound, and all relevant contextual and prerequisite knowledge and experience is met, the result is that the intellect will necessarily assess the proposition at its entailed level of

conviction. For example, regarding the proposition “A square is not a circle,” the sound intellect of anyone who is properly informed of the meaning of square and circle will assess with absolute certainty that the proposition is true. Not all propositions are so straight forward, and as such, not all intellects will assent at the same level of entailed conviction. This is not due to any issues of relativity, but rather because one person might not have all of the requisite knowledge, or he may misunderstand one or more of the core terms, or he may not reason properly due to lack of familiarity with the rules of logical inference. However, when one has all the requisite knowledge, understands all the terms properly, and knows the rules of inference either through natural disposition or formal study, then, his intellect will assess a proposition according to its entailed strength of conviction. It is not surprising that quite often, two thinkers do not have access to the same knowledge and understanding, and errors in reasoning, even in the learned, are not uncommon.

Levels of Entailed Conviction

Returning to the metaphor of the voltage meter, while the object of knowledge contains the charge or voltage that is registered by the voltage meter (the intellect), the actual reading between 0 and 100 on this metaphorical epistemic voltage meter is the entailed strength of conviction. Fire, sensed with touch, produces a 100% reading (i.e., certainty in the hotness of that particular fire). A hadith with multiple textual variants and chains of transmission containing a forgetful narrator will produce a reading below 100% with regard to transmission and signification.

When considering the objective value of objects of knowledge—a campfire that one builds to stay warm, a claim to prophecy accompanied by a miracle, a transmitted report about past kingdoms, a meteorologist's weather report, or the mind's conception of a giraffe—one realizes that some objects of knowledge produce complete certainty via the relevant epistemic channels, individually or combined. Others produce high levels of confidence, just shy of certainty, while others might produce only doubt, skeptical denial, or even absolute denial and rejection.

We can deduce five core levels of entailed strength of conviction that a rational and properly informed person might obtain from various knowledge sources. For example, one with a functioning intellect who has been informed of all the relevant variables surrounding a given transmitted text—such as the language in which a statement was made and details regarding its transmission (i.e., the number of narrators, their names, their dependability, etc.)—such a person is rational and properly informed in that we expect them to obtain a particular entailed strength of conviction based on those variables. The levels of entailed strength of conviction can be represented by percentages. For example, a 100% level of conviction means one is absolutely sure that a claim is true or an interpretation is correct and that it corresponds with reality. A 0% level of conviction means one has no confidence that the claim or interpretation is correct, that is, they know that it is definitely false in reality. Another way to think about this is that the essential and/or relevant non-essential properties of objects of knowledge when perceived by the appropriate epistemic channels will produce an intellectual assessment of the probability that a given proposition corresponds to reality. The probability of that correspondence can be represented as percentages and are divided into five categories according to whether the intellect assents to the proposition—absolutely or tentatively—or rejects the proposition—absolutely or tentatively—or neither assents nor rejects it. One can find gradations between these—as one finds in the various rankings of hadiths—but these five are a sufficient starting point for multiple sciences.

The five levels of entailed strength of conviction are given below, using the example of transmitted reports, though one could construct a similar chart using other types of objects of knowledge.

- 1) *Absolute Certainty*—100%: The intellect assesses the proposition's entailed strength of conviction to be certain (*yaqīnī*). The claim is certainly true, the interpretation of the listener or reader is absolutely the same as the speaker or writer intended, and/or the text has been accurately transmitted from and ascribed to its original speaker.
- 2) *Supposition*—51%-99%: The intellect assesses the proposition's entailed strength of conviction to be probable (*ẓannī*). In this case, the claim, interpretation, or ascription ranges from probably correct to most probably correct, though with a possibility of error in some or all of its parts. For example, one could be 99% confident that a historical report about a past king is correct, with a very slight possibility that some or even all of the details of the report are incorrect. It is probably correct, possibly incorrect.
- 3) *Doubt*—50%: The intellect assesses the proposition's entailed strength of conviction to be doubtful (*shakkī*). This is when one's confidence in the veracity of the claim, the accuracy in reporting and attribution, and/or interpretation of its meaning is such that one has no reason or evidence to accept or reject it. More evidence would be needed to incline towards believing or rejecting the claim or accepting or rejecting its interpretation, attribution, or accuracy.
- 4) *Suspicion*—1%-49%: The intellect assesses the proposition's entailed strength of conviction to be improbable (*wahmī*). While the possibility that the claim, interpretation, or ascription being correct is above zero, it may range from extremely unlikely that it is correct (1%) or probably incorrect (49%). One believes there is a higher probability that it is incorrect rather than correct.
- 5) *Denial*—0%: The intellect assesses the proposition's entailed strength of conviction to be unthinkable (*takhyīlī*). The claim, interpretation, and/or ascription is definitely incorrect and there is no reason or evidence to believe otherwise.

Warranted Belief: The Relationship Between Entailed versus Experienced Confidence Levels

The entailed strength of conviction is an entailed confidence level that one obtains after intellectual assessment of the requisite evidence based on relevant experience. It is the result of the sound use of epistemic channels, including the intellect when it forms or assents to a proposition. The entailed strength of conviction can be contrasted with a psychological account of belief, that is, one's *experienced confidence level* which may or may not correspond to the entailed confidence level.

Experienced confidence levels are either passive or active. For example, one with a phobia of escalators may know from experience, statistics, and expert testimony that the truth of the proposition "Escalators are safe" is highly probable but may experience a non-rational belief that "Escalators are not safe." Despite the evidence, one *passively* and unintentionally believes otherwise. As for *experienced confidence levels* that are the result of an active and intentional psychological/cognitive effort, examples include confident denial that George Washington existed—despite the certain and mass-transmitted reports that he was the first president of the United States—and the confident belief that Mecca exists, whether due to mass-transmitted reports or eye-witnessing. The latter is warranted, and the former is unwarranted, as discussed below.

<i>Intellectual Assessment of a Proposition's Entailed Strength of Conviction</i> (<i>Intellectually Entailed Confidence Level</i>)	<i>Warranted Strength of Willful Belief, Denial, or Noncommitment</i> (<i>Warranted Willful Confidence Level</i>)
Certain (<i>yaqīnī</i>): 100% strength	Confident belief (<i>i'tiqād jāzim</i>) (or conviction)
Probable (<i>ẓannī</i>): 51–99% strength	Tentative belief (<i>i'tiqād ḡhayr jāzim</i>) (or supposition)
Doubtful (<i>shakkī</i>): 50% strength	Noncommitment (Suspension of belief) (<i>'adam al-i'tiqād</i>) (or doubt)
Improbable (<i>wahmī</i>): 1–49% strength	Tentative denial (<i>inkār ḡhayr jāzim</i>) (or suspicion)
Unthinkable (<i>takhyīlī</i>): 0% strength	Confident denial (<i>inkār jāzim</i>) (or denial)

We can also contrast entailed confidence levels with willful confidence levels. In this case, one *actively* chooses to affirm and adopt a view that may or may not correspond to the evidence. For each of the entailed confidence levels (i.e., the entailed strength of conviction) there is an appropriate willfully adopted confidence level that corresponds to it. When the intellect assesses that a proposition is certain (100%) and one willfully adopts confident belief (100%), this would be a *warranted belief*. However, were one instead to willfully adopt a tentative belief, noncommitment (suspension of judgment), tentative denial, or confident denial, then any of these four willful responses would be called *unwarranted supposition* (*tentative belief*), *unwarranted noncommitment*, *unwarranted suspicion* (*tentative denial*), or *unwarranted denial* (*confident denial*), respectively.

Taking the example of the signified meaning of a stop sign at an intersection, for the purpose of demonstration, the warranted belief is that the meaning of the sign is that one must stop their vehicle. This is known because all licensed drivers learn this and pass a driver's test, and assuming that our interlocutor is rational and qualified—his vision is 20/20 with or without glasses, he reads English, and he passed his driver's test—he could not plead ignorance in a court of law. The stop sign was perceived via the epistemic channel of sight and along with the conditions of rationality and qualification, and the stop sign yields 100% entailed conviction that it signifies that the driver must stop the car.

However, if one's rational and qualified interlocutor who also used his sense of sight to perceive the stop sign then claims, "I suppose this sign probably means I should stop, but maybe not," then, assuming he is not lying about his belief, his actively adopted psychological account of the sign's meaning is unwarranted. It is hard to imagine the sincere belief that the stop sign only signifies the probability that one should stop, but one can imagine this scenario for the sake of demonstration.

Using the above example where one obtains absolute certainty in the meaning signified by the stop sign and that belief corresponds to reality as evidenced by the official government record of traffic laws, there are four categories of unwarranted willful belief, denial, or suspension in relation to warranted confident belief.

When one's interlocutor claimed, "I suppose this sign probably means I should stop, but maybe not," this willfully adopted view would be unwarranted supposition (*tentative belief*). That is, by claiming the sign's signified meaning is probably but not absolutely that one should stop, he is saying his confidence level is

between 51% and 99%. However, the objective value of the sensory epistemic object (e.g., the stop sign) is absolute and, when perceived via the sense of sight, the entailed strength of conviction is 100% that the command to stop is what is intended by the sign. If, however, one’s interlocutor were to claim, “I think this sign might be telling me to stop, but it is equally possible that it is telling not to stop,” then such a belief would be unwarranted doubt or suspension of belief, since he is saying his confidence level is 50%/50% rather than the warranted 100% confidence in the sign’s actual meaning.

Were he to say, “I suspect this sign is more likely telling me not to stop, but there is a smaller possibility that it is telling me to stop,” then his belief would be unwarranted suspicion as his confidence is between 1%-49% despite the absolute objective value of the sign producing 100% entailed conviction upon intellectual assent to its meaning. Finally, were he to say, “This sign definitely does not mean stop,” then his belief would be unwarranted denial, as he claims 0% confidence that it could mean one must stop his vehicle when all evidence points to the exact opposite, namely 100% confidence that it means one must stop.

The chart below summarizes these points using the example of a certain intellectual assent—based on evidence—that corresponds to reality and is believed with absolute conviction after perception of a sensory object of knowledge with an absolute objective value via the appropriate epistemic channels. That is, the willfully adopted belief is based on 100% entailed conviction, and the unwarranted claims contradict this.

<i>Entailed strength of conviction (entailed confidence level)</i>	<i>Warranted Willful Response (Belief, Denial, Suspension) and Confidence Level</i>	<i>Unwarranted Willful Confidence Level</i>	<i>Unwarranted Belief</i>
100%	Absolute Conviction (Confident Belief)/100%	-	-
100%	-	51%-99%	Unwarranted Supposition
100%	-	50%-50%	Unwarranted Doubt
100%	-	1%-49%	Unwarranted Suspicion
100%	-	0%	Unwarranted Denial

Reasons for Unwarranted Willful Response

The above examples all assume one’s interlocutor is not lying, insane, or ignorant of the requisite knowledge when making a claim that is other than the warranted belief. However, if one’s interlocutor is rational and qualified, then willfully adopting any of the unwarranted positions is really a form of self-delusion, because unwarranted beliefs are against the assent of his own intellect based on evidence. As a useful side note, this sort of willful adoption of a belief that is contrary to the entailed strength of conviction obtained by one’s intellect is at the heart of religious disbelief (*kufr*). Theologians define disbelief as the willful denial of the absolutely certain truths of revealed religion by one who is rational, of age, and reached by the message (*bulūgh al-da’wa*) of the prophet of their time. The latter condition—being reached by the message—can be restated in the language of epistemology as “being properly knowledgeable of all the relevant and requisite evidence that entails intellectual assent with absolute certainty.” That scholars do not consider one a disbeliever if one willfully denies a point of creed whose transmission and/or interpretation is not absolute further clarifies this discussion of warrant. In this case, one who has unwarranted noncommitment, tentative denial, or confident

denial of a probabilistic point of creed or law would either be a heretic (yet, still a believer) or without any negative theological label, depending on the point of creed and its probable degree of correctness.

Other Reasons for Adoption of Unwarranted Beliefs: Psychological Factors

We have discussed passive forms of unwarranted beliefs that contradict the entailed strength of conviction, as well as active and willful forms of unwarranted belief. Other reasons that one might adopt a position that contradicts the entailed confidence level could be due to a lack of qualification as when one does not have the requisite rationality, knowledge, or sound senses. Someone may not even be aware that one or more of these qualifications is lacking, such as one who studied world history from a Eurocentric perspective and never learned that Muslim theologians and philosophers are the source of many Medieval Christian views in logic, theology, and philosophy. However, when such a historian learns that Avicenna, Averroes, and others wrote detailed and original critiques and commentaries on the Aristotelian tradition, for example, but continues to fully reject Muslims' impact on European thought, then there is some other psychological factor influencing his adoption of an unwarranted and incorrect opinion. When that is the case, then one might try to identify that psychological factor, such as fanatical partisanship or racism in one who casts doubt on an absolutely certain or highly probable claim with unwarranted supposition. One might identify an irrational sort of moderate skepticism in one who expressed unwarranted tentative belief (supposition) when absolute conviction is warranted, or a delusional form of extreme skepticism in one who expresses unwarranted suspension of belief, or unwarranted tentative denial when confronted with probable or certain levels of entailed conviction. As for one who expresses unwarranted denial despite knowing the absolute certainty of the claim, the psychological factor influencing his stance might be arrogant obstinacy.

Another common scenario that one should be aware of is the tendency to overstate one's confidence in an effort to take a claim that is rightfully below absolutely certain—whether probable, doubtful, improbable, or incredible—and raise it to the level of certainty. Regardless of whether or not the person believes their own overstatement of confidence, this could be done in order to obtain funding for medical research, unjustly convict a scapegoat, win a contracting bid, or a host of other reasons. If one knowingly overstates one's confidence to another person for the above-mentioned reasons, then it is lying, plain and simple. However, if one willfully adopts the unwarranted confidence level and belief for themselves, it is ultimately a form of self-delusion.

An honest and responsible truth seeker does not merely look for these psychological factors in others, but rather looks within oneself to ensure that one's partisan preferences, whims, arrogance, or prejudice does not affect one's judgment. Likewise, one should not always assume that one's interlocutor or oneself necessarily has all the requisite qualifications of knowledge, especially in matters that are inferential (*nazarī*), require contemplation and multiple steps in reasoning, and yield only probabilistic knowledge. That is, in matters other than the absolutely certain wherein both parties are properly informed and qualified, one should always assume that differences in opinion might be based on differences in knowledge, interpretation, and understanding, especially when one's interlocutor is willing to engage in civil discourse and debate.

It is also important to keep in mind that labelling the kind of belief held by a particular individual assumes that that individual is rational and properly informed. This is different from someone who is not properly informed and is unaware of that fact (that is, they do not know, and they are unaware that they do not know). This also allows for instances where we—as the ones passing judgment on another's beliefs—might not have all the

relevant information and might label someone as fancifully following their hopeful expectations but in fact they adopted a position that had more than 51% probability of being true. Beyond the certainly true and the certainly false lies a spectrum of probability and possibility, and good critical thinkers should be prepared to revisit some of the positions they held too strongly within that spectrum of possible views.

Legitimate Difference of Opinion (*ikhtilāf*) vs. Unwarranted Willful Belief

Warranted Disagreement Over Probabilistic Matters: *Ijtihād* and *Ikhtilāf*

With that, not all differences of opinion should be considered the difference between one's warranted belief and one's interlocutor's unwarranted belief, denial, or suspension. That is because in order for a belief to be labelled unwarranted, it must be adopted willfully and against the evidence at hand, or with invalid evidence, or none at all. Some differences of opinion are valid, meaning that both opinions are warranted tentative beliefs based on the probabilistic evidence at hand, but different conclusions are reached due to legitimate differences in methodology and interpretation. For example, the difference of opinion between the Shāfi'is and the Mālikis regarding the purity or impurity of dogs is based on sound methodological and interpretive differences. Such a difference of opinion would be valid. However, the validity of each differing probabilistic view is not due to the correctness of either view, since in matters of legal reasoning (*ijtihād*) the correct answer is only known to Allah.

Warrant and Truth

One of the definitions of (certain) knowledge used by scholars across religious and philosophical traditions is 'justified true belief'. In the Islamic tradition, this is sometimes expressed as "certain belief, established from proof, corresponding to reality" (*al-i'tiqād al-jāzīm al-thābit 'an al-dalīl al-muṭābiq bi-l-wāqi'*). This excludes any belief that is other than certain or absolute. It also excludes beliefs that are obtained through merely following the belief of another without evidence (*taqlīd*). Also, a firmly held belief that is accompanied by an unsound proof that contradicts reality is excluded. Our concern has been beliefs in proper or warranted claims in relation to their proof, where the proof dictates the probability of correspondence to reality. Ours is a correspondence theory of truth, in that true and correct belief is not just a belief accompanied by a valid yet probabilistic proof (as one finds in the science of derived laws (*fiqh*)), but rather true belief that actually corresponds to reality.

With that, a subtle distinction between our use of the term 'warrant' and 'truth' should be made. Belief in a proposition is *warranted* if and only if the intellect assents to the proposition after having met all necessary conditions, including possessing sound intellect and senses, knowing the definition of terms, and having access to requisite evidence, experience, and contextual information, as well as using the proper mode of knowledge obtainment (immediate or reflective). As mentioned previously, there is a broader use of the term 'warrant' that one finds in contemporary analytic philosophy. Two important distinctions in our usage is that a) a warrant as justification is not necessary in matters that are immediately obtainable, such as the self-evident knowledge that the whole is greater than its parts, and b) a probable or improbable level of confidence would be warranted when respective belief (supposition) or denial (suspicion) is tentative, even if the actual fact in reality contradicts the proposition under discussion. That is to say, a warranted tentative belief that X is Y remains warranted even if in reality the truth turns out to be that X is not Y. However, once the truth is known with certainty, what was previously a warranted tentative belief would become an unwarranted tentative belief in the face of absolute proof.

By way of demonstration, we can present all four logical possibilities for the pairing of warrant and truth:

- 1) **Warranted and Incorrect:** As mentioned previously, disagreements based on differing methods of legal reasoning and interpretation are warranted if the methods are defensible even if the truth in reality is contrary to one or more of the disagreed upon positions. The Prophet ﷺ taught that a scholar who reasons and is correct gets two rewards, and the one who reasons but is incorrect receives one (see *Ṣaḥīḥ Muslim*). Reward is in the domain of the next life, and it would only be when Allah reveals the answer to all parties that the actual truth would be known.
- 2) **Warranted and Correct:** In addition to the scholar whose reasoning in a matter of disagreement leads to the correct answer only to be revealed in the next life, we can consider the following correct and true proposition: “I must not pick up this rattlesnake.” If the one who holds this proposition to be true does so based on the proposition “All rattlesnakes are venomous,” which one has determined through repeated observation, while holding the implicit inference that a causal relationship exists between exposure to rattlesnake venom and harm or death to humans, then their confident belief would be warranted, as causal association (*tajriba*) produces the entailed confidence level of certainty.
- 3) **Unwarranted and Correct:** However, if one lacks the requisite knowledge and experience, then their opinion would be unwarranted and unqualified, even if correct. For example, if one holds the opinion “I must not pick up this rattlesnake” based on the false proposition learned from one’s five-year old cousin “All snakes are venomous,” one’s decision to not pick up the snake is correct, but it is based on a demonstrably incorrect proposition obtained from a non-expert. This is not a matter of choosing an unwarranted belief against the entailed strength of conviction, since one’s intellect never had access to the requisite knowledge to make that sound assessment. It is not unwarranted because it is against the requisite evidence; rather, it is a broader category of unwarranted belief in that it is not based on relevant evidence.
- 4) **Unwarranted and Incorrect:** If a qualified meteorologist’s intellect assesses that “Today’s weather in Boston will be warm and sunny” with a 90% probability of correctness, but then that meteorologist adopts a confident belief that the probability is 100%, then this confident belief is unwarranted. When the rain clouds roll in and the temperature drops, said meteorologist’s unwarranted confident belief is then proven incorrect.

In summary, when the confidence with which one willfully believes corresponds to the intellect’s entailed strength of conviction regarding reality is properly based on reflective evidence or immediacy and obtained via the appropriate channels, then that belief is considered warranted. Our goal as truth seekers is to ensure that our beliefs are warranted, whether those beliefs are conviction, supposition, doubt, suspicion, or denial. Understanding the relationship between the objective value of objects of knowledge, the appropriate epistemic channels, the intellect’s assessment of entailed strength of conviction, and our willful belief, denial, and noncommitment helps us more honestly pursue truth.

Modal Standards and Warranted Belief: Getting on the Same Page

Another reason for disagreement in matters that appear to have only one warranted willful response (belief, denial, noncommitment) is that two people may be approaching an issue from the vantage point of different modal standards. Through the modal standard of the intellect alone, the claims expressed in propositions are judged to be intrinsically necessary, impossible, or possible based on the intrinsic reality of the subject and

predicate. A square, necessarily, is a four-angled shape. A circle, impossibly, is a four-angled shape. A circle, possibly, is three inches in diameter.

The other two modal standards of greatest importance to Muslim students and scholars are *nomic* and *revelational*. *Nomic* modal judgments assert that, according to predictable customary cause and effect relationships observed in the natural world, a proposition about the natural world is *nomically* necessary, impossible, or possible. The Atlantic Ocean, necessarily, is a body of saltwater. Fire, impossibly, causes water to freeze. It will, possibly, rain in Mecca. These three modalities of judgment are qualified by being nomic, that is, nomically necessary, nomically impossible, and nomically possible. Since the cause-and-effect relationships between things in the seen and unseen created universe along with their properties are merely intrinsically rationally possible—as Allah could have created fire to always be cool or the boiling point of water to always be zero degrees Celsius—then whatever is observed as a constant state without any anomalies is deemed to be nomically necessary yet rationally possible (i.e., fire burns). Whatever is observed to never be the case, without any anomalies, is deemed to be nomically impossible yet rationally possible (i.e., fire freezes water into ice). Whatever is observed to sometimes be the case and at other times not to be the case is deemed to be nomically possible and rationally possible as well (i.e., that it will rain in Mecca today/that it will not rain in Mecca today).

Revelational modal judgments assert that, according to Divine revelation via the Qur'an or Sunna, a particular proposition is necessarily true according to revelation, impossibly true according to revelation, or possibly true. Any proposition that concurs with a statement found in a text that is absolute in transmission and interpretation will be revelationally necessary. Any proposition that contradicts a statement found in a text that is absolute in transmission and interpretation will be revelationally impossible. Any proposition that concurs with or contradicts a statement derived from a text that is either absolute in transmission yet probabilistic in interpretation, or probabilistic in transmission and either absolute or probabilistic in interpretation, will be revelationally possible. This is from the perspective of judging the proposition's correspondence to truth. Revelational modal judgments can also be viewed from the perspective of ontological modality, that is, that something necessarily, impossibly, or possibly is the case in reality. For example, heaven, necessarily, is real. Angels, impossibly, are female. So-and-so's sins will, possibly, be forgiven.

The third category of intrinsic rational modal judgments, namely rational *possibility*, leads to other modal standards whose modal judgments are extrinsically necessary, impossible, or possible. That is, something that is intrinsically merely possible might be extrinsically necessary, impossible, or possible depending on the extrinsic modal standard being applied (i.e., nomic or revelational). For that reason, rational, nomic, and revelational standards of modality are connected to warrant and disagreement because three people might be assessing a proposition through three different modal standards.

Take for example the following statement: "Humans evolved from slugs."

Via the rational modal standard, the modal judgment of the intellect alone would be that this statement is *possibly* true. That is because without reference to anything other than the reality of humans, slugs, and evolution being mere change in biological features over time based on environmental adaptability, it is possible that humans evolved from slugs. Via the *nomic* modal standard, based on empirical evidence derived from the fossil record, one might argue that the proposition is judged to be nomically possible, and, perhaps, even highly probable. However, when viewed via the lens of the *revelational* modal standard, the proposition

that “Humans evolved from slugs” is revelationally impossible as it contradicts the Qur’anic account of human origins.

When believers argue that it is impossible that humans evolved from slugs, they are saying that, while it is intrinsically rationally possible and extrinsically nomicly possible for such evolution to have occurred, it is extrinsically revelationally impossible that humans evolved from slugs. That is, the mind says “maybe,” the fossil record says “probably,” but revelation says, “no way.”

Returning to the concept of warranted willful belief and given the claim “Humans evolved from slugs,” 1) when the intellectual assessment of the claim produces an entailed strength of conviction of 50% when based solely on the rational consideration of the reality of the subject and predicate, 2) the intellectual assessment of the claim produces an entailed strength of conviction greater than 50% but less than 100% when considered via the nomic standard which draws only from empirical observation of customary natural causes and effects, and 3) the intellectual assessment of the claim produces an entailed strength of conviction at exactly 0% when viewed via the standard of revelation, then 4) one’s warranted willful response must take into consideration each of the three modal standards.

Were one to only view the proposition via the lens of the intellect, then the warranted response would be noncommitment. Were one to view the proposition via the lens of the nomic standard, then the warranted response would be tentative belief or supposition unless contradictory evidence was presented. But when one views the proposition through the lens of revelation, the warranted response is confident denial that humans evolved from slugs. For one who has been reached by and properly understands revelation, it becomes the criterion through which rational possibility and nomic necessity, impossibility, and possibility are assessed. Wooden staffs turning into snakes and the moon’s splitting in two are rationally intrinsically possible phenomena, and though nomicly highly improbable, they are revelationally necessary, and as such the only warranted response is firm conviction.

Conclusion

There are other elements that impact the epistemic signal flow from objects of knowledge to willful belief in the knowing-self, including the mode of knowledge obtainment (immediate verses reflective reasoning) and availability (public verses private knowledge). Propositions are publicly available when they can be intellectually assessed by anyone possessing the requisite epistemic channels and having access to the same objects of knowledge. If any sound intellect assesses 1) after mere conception, or 2) after access to a single sensory experience of the sensory object via the sound and relevant sensory channels, or 3) after additional experiences and conditions after the initial sensory experience, then 4) so long as these meanings, sensory objects, and additional experiences and conditions are publicly available, even if effort (i.e., study or travel) must be expended, then 5) their resultant entailed strength of conviction will be uniformly experienced by all who share in the conception and requisite experiences.

Islamic epistemology is based on ontological realism (things have real existence) and epistemological accessibility (some things are knowable), in contrast to various forms of sophistry that deny the real existence of things, their having a concrete observer-independent reality, and/or their knowability. The knowability of objects of knowledge, as discussed above, pertains to essential and non-essential properties of those objects of knowledge which metaphorically constitute an epistemic charge or voltage which, when registered via the

appropriate metaphorical sensors (that is, perceived via the appropriate epistemic channels), provide a measurable metaphorical meter reading of different levels (that is, the entailed strength of conviction or confidence) when assessed by the sound and properly informed intellect, which is then read by the metaphorical meter-reader of the knowing-self. Upon receiving this meter-reading, the self then either passively accepts or rejects this reading and believes and testifies accordingly, or actively accepts or rejects this reading and believes and testifies accordingly. When that belief, whether active or passive, accords with the entailed strength of conviction that the intellect obtains upon assessment, then that belief is warranted. When that belief does not accord with the entailed strength of conviction, then it is unwarranted. Having warranted certain belief that corresponds with reality is to see things as they truly are. The goal of Islamic epistemology is to know the certainly true as certainly true and the certainly false as certainly false. Whatever falls between the two extremes of absolute truth and absolute falsehood are propositions of probabilistic value whose investigation falls in the domains of their relevant sciences. In these domains of probabilistic knowledge, the true scholar admits their limitations, proceeds with humility, and sides with truth whether it is for or against him.



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