Opinion, Assertion and Knowledge: Kantian Epistemic Modalities¹

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1. Introduction

In this paper I argue that the modern notion of belief is not apt for the explanation of the concept of knowledge: knowledge just is not a special case of belief. My proposal is to substitute the notion of judgement for that of belief in the explanation of knowledge. Eventually, knowledge is explained as evident judgement, as in the writings of Per Martin-Löf. How belief relates to other epistemic modalities such as opinion and knowledge, and how these relate to judgement, was already queried by Bolzano and Kant. In fact, the Kantian presentation of epistemic modalities proves to be a good starting-point for the explanation of these notions.

2. Assertion and Judgement

When someone asserts 'Snow is white', an interlocutor is entitled to ask 'How do you know?'. If the asserter is not able to give grounds for his assertion, it has to be withdrawn. In an assertion an illocutionary claim that one has grounds is present; an assertion is thus a claim to knowledge.² Not all occurrences of declarative sentences are asserted: examples on the blackboard, or antecedents of conditionals, are not asserted. The meaning of a declarative is called *assertion candidate*. Although the assertion candidate need not be actually asserted, it can only be construed in terms of *acts of assertion*. The assertion candidate that is expressed by a declarative sentence is explained in terms of the assertion-condition for the declarative in question, that is, the (epistemic) condition for making an act of assertion by means of an assertive uttering of the declarative in question.

As Dummett says, judgement is the interiorisation of assertion (Dummett 1973, p. 363). The inner notion of judgement is to be explained by the outer notion of assertion. Just as for assertion explained above, implicit in every judgement is a claim to knowledge; judgement is thus an epistemic notion. 'Assertion' and 'judgement' share a

¹ I thank Göran Sundholm, Bjørn Jespersen and Tapio Korte for comments on earlier versions of this paper.

² Cf. Martin-Löf 1983 and Sundholm 1988, see also the latter's contribution to this volume.

similar ambiguity: 'assertion' may either mean the act (or process) of asserting or the asserted declarative (the assertion made, the product of asserting). The assertion product is explained as the result of the act of assertion, and is thus a notion secondary to the latter (cf. Martin-Löf 1987, p. 416f).

The notions of assertion act, assertion candidate (which may also be called the judgement candidate) and assertion product are to be distinguished from the notion of proposition. The proposition *that snow is white* is what is asserted to be true in an assertion made through an utterance of the declarative 'snow is white'. The proposition is indicated by a *that*-clause, not by a complete declarative. The assertion candidate *snow is* white may be analysed as consisting of the proposition that snow is white together with the meaning of the indicative. The assertion candidate snow is white is thus equivalent to that snow is white is true (cf. Sundholm 1999). Although the indicative mood is present, the assertion candidate need not be asserted. The assertion candidate is not a special case of an assertion made; 'candidate' is here a modifying term like 'false' in 'false friend'. We may analyse the assertion candidate as consisting of a proposition together with the meaning of the indicative, but the notion of proposition is not used for the explanation of the assertion candidate. As we have seen above, the assertion candidate is explained, through the notion of assertion-condition, in terms of act of assertion. The notion of act of assertion is prior in the order of explanation to that of assertion candidate, and the latter notion is prior to that of proposition. Because act of assertion is an epistemic notion, the notion assertion candidate is so too.

Essential to Martin-Löf's constructivism is the distinction between propositional truth and truth as assertibility. The judgement candidate is the bearer of truth as assertibility or knowability; it is true precisely if it is possible to ground it, that is, if it is knowable.

3. A Critique of the Notion of Belief

Knowledge is, standardly, analysed as a special case of belief, namely as *justified true belief*. What does *belief* mean in this context? The term 'belief' has associations with the terms 'faith', 'confidence', 'opinion', 'conviction' and 'acceptance'. What is needed in the standard explanation of knowledge besides the notion of justification and truth is a

notion that conforms to the fact that the judger accepts the relevant proposition as true and that he has a certain degree of conviction of the truth of that proposition. The notion of belief thus consists of two notions, which are themselves complex. The notion of acceptance, in its turn, is not clear enough. In order to have knowledge it is not enough merely to accept something: one has to accept it while aiming at truth or knowledge, and not, for example, while aiming at the interest of a certain group.

Some have argued that the notion of belief is primitive. They consider belief to be a mental state that is not explained in terms of (outer) acts. They hypostasise belief as a disposition; belief is thus a mystery. To answer this criticism it is suggested that mental states are nothing but neurological states. But how can the notion of a neurological state be of use in the explanation of knowledge?

These explanations all treat belief as a psychological notion. When we ask 'How do you know?', we ask for grounds. The question we may raise concerning belief is not a *how*-question. We ask: 'Why do you believe?', that is, we ask for psychological causes or motives, not for reasons or (cognitive) grounds. The notion of belief may function within a Humean psychology as a lively idea or feeling associated with certain ideas, but not in the explanation of knowledge. What is needed in the explanation of knowledge is an *epistemic* notion and not a psychological one. In section 6 it will be argued that the epistemic notion of judgement (candidate) as introduced in section 2 is to be substituted for the notion belief in the explanation of knowledge.

4. Bolzano and Kant on Judgement and Cognition

Non-Humean or nonnaturalistic concepts of judgement and knowledge can be found in the writings of Bolzano and Kant. Here there are two notions of knowledge: *Erkenntnis* and *Wissen*, for which I will use the terms 'cognition' and '(certain) knowledge', respectively. 'Certain' is meant to translate the term 'gewiss' that shares its root with 'Wissen'.

Bolzano's explanation of cognition is straightforward. It is explained as correct judgement, and correct judgement is explained as an act of judgement that has a true proposition as its content (Bolzano 1837, I, §36). For Bolzano, a logical Platonist, the notion of proposition-in-itself (*Satz an sich*) is a primitive notion in terms of which

judgement and knowledge are explained. By taking the proposition to be the primary truth-bearer, Bolzano is able to explain the notions of truth and falsity prior to that of an act of judgement. Later, Bolzano gives a more differentiated explanation of cognition. Cognition is not an act or process of judging, but a state. Cognition of A's being true ('einer wahrheit A') is a mental state ('Zustand unsers Gemüthes'), such that the knower has once judged that A is true, remembers that he has judged so, and, every time he thinks of A, judges A to be true (Bolzano 1837, III, §307,1; cf. §306, 3).

The notion of justification does not form part of Bolzano's explanation of cognition. Cognition of the truth of the proposition A together with cognition of its objective ground (the reason why the known proposition is true) is insight or understanding, according to Bolzano (Bolzano 1837, III, §316, 4). Both cognition and understanding are distinguished from certain knowledge (*Wissen*), as we will see in the next section. For Bolzano, my cognition of the truth of A may be the result of a blind act of judgement. As long as I happen to hit truth, I have cognition. Bolzano contrasts his explanation of knowledge and judgement with the explanation given by Kant, who seems to explain judgement in terms of knowledge (Bolzano 1837, I, §35, note 5).

Kant does use the term 'Erkenntnis' (cognition)³ in the explanation of judgement, but he uses the term in a broader sense than Bolzano does. For Kant, cognition is an objective perception, being either an intuition or a concept of an object (*Kritik der reinen Vernunft* (*KrV*), A320/B376). Kant uses 'cognition' as a generic term in relation to 'judgement'.⁴ In general we may say that Kant gives two different types of explanations of the concept of judgement act. A more traditional one is given in the *Jäsche Logik*, where the main role of the act of judgement is its unifying function: "a judgement [act] is the presentation of the unity of consciousness of different presentations." (*Logik*, §17). In this explanation a truth-claim is not considered to be essential for the judgemental act. This is in accordance with the contrast that Kant makes between the terms 'Urteil' and 'Satz' in the *Logik* (§31, A170): 'Proposition' refers to the act of asserting; 'judgement'

³ In general I use Kemp Smith's translation; deviations are noted. Here I deviate from Kemp Smith who uses 'mode of knowledge' as translation of 'eine Erkenntnis'; the recent Cambridge translation by P. Guyer and A.W. Wood from 1998 uses 'cognition'. Neither of them adds 'certain' to 'knowledge' when translating 'Wissen'. Instead of 'certain knowledge' one could use 'science', because Kant uses the Latin 'scientia'. It is to be noted that Kant's 'scientia' is a term considerably broader than the common English term.

⁴ We may thus find the expression 'falsche Erkenntnis'.

may refer to the act where one has not made up one's mind yet. In an 'act of judgement' concepts are brought into a unity, such that this unity is apt for holding it true or false. The 'act of judgement' in the sense of act of unifying thus produces something that may subsequently be asserted. This unifying act does not have a function similar to the modern notion of judgement act or assertion act explained in section 2; rather, it has a function similar to the act of apprehension or understanding. In terms of section 2, we may say that for Kant this unifying act is essentially the apprehension of the assertion candidate.

A modern explanation of the concept of judgement act is given in the B edition of the *Critique*, §19: "a judgement [act] is the way that given cognitions are brought to the objective unity of apperception" (B141). The judgement act is distinguished from a subjective association in the imagination by its 'objective validity'(B142), which may be interpreted as a claim to truth. The explanation of judgement as a claim to truth can be found in the writings of Bolzano and Frege, and has now become standard.

At other places Kant gives a variant of the modern explanation of judgement: in a judgemental act we apply a concept to an *object*, which makes it a cognition; more specifically, in judgement we mediately apply a concept to an object, that is, mediated by a concept (or intuition) of the object.⁵ In the judgement 'All bodies are divisible', we apply *divisibility* to objects that are mediated by the concept *body*. Kant identifies discursive knowledge with judgement, where 'knowledge' is taken in a broad sense. That is, every judgement involves a knowledge-claim. Again, judgement is an act through which given presentations become cognitions of a certain object.⁶ The traditional and the modern notion of judgement relate to each other as *judgement candidate* to *judgement*.

Kant famously criticises in the B edition of the *Critique* the traditional concept of judgement because it takes concepts to be logically prior to judgements. Because of this order of explanation the traditional theory of judgement is not able to see that judgement is an act *sui generis*. According to Kant, we can make use of concepts only in an act of judgement, that is, only by applying them to objects. Similarly, the object to which concepts are related cannot be explained independently of the act of judging

⁵ Judgement is "die mittelbare Erkenntnis eines Gegenstandes" (KrV, A68/B93).

⁶ "Eine Handlung, durch die gegebene Vorstellungen zuerst Erkenntnisse eines Objekts werden," *Metaphysische Anfangsgründe der Naturwissenschaft*, A XIX.

(Longuenesse 1998, p.108). It is misleading to call the elucidations Kant gives of the notion judgement 'explanations', or even 'definitions' as Longuenesse does. The notion of judgement cannot be defined in terms of concept and object, as it is logically prior to them.

5. Bolzano and Kant on Meinen, Wissen, Glauben

a. Bolzano

Traditionally, for example in Kant and Bolzano, notions such as believing (*Glauben*) and opining (having an opinion, *Meinen*) are contrasted with the notion of certain knowledge (Wissen), rather than that of cognition (Erkenntnis). Opinion, belief and certain knowledge are special ways in which we may epistemically relate to our judgements, that is, they are kinds of epistemic attitudes towards our judgements. Bolzano explains certain knowledge in terms of confidence (Zuversicht). The difference between belief and certain knowledge is not determined by the degree of confidence, though: we can be maximally confident in what we believe and yet fail to have knowledge. According to Bolzano, we have certain knowledge of a truth, precisely when the confidence with which we hold judgement M appears to us as being no longer in our power to destroy (Bolzano 1837, III, §321). In the case of believing, it appears to be in my power to persuade myself of the opposite judgement. Belief with a lesser degree of confidence Bolzano calls Meinen (opining). Aside from its having a true proposition as content, certain knowledge is thus explained psychologically, in terms of confidence and persuasion; it is neither required, nor ensured, that we get this confidence from a proof or insight.

b. Kant's notions of problematic, assertoric and apodictic judgement

Kant considers opining, believing, and knowing to be special cases of problematic, assertoric and apodictic judgings, which themselves form one of the four logical functions of the understanding (*Verstand*), namely modality (*KrV*, A70/B95). Modality is distinguished from other logical functions such as quantity and quality, in so far as it does not add anything to the content of the judgement (*KrV*, A74/B100). Modality does not concern the content of our judgement, but only our *way* of judging. "Modality …

determines the relation of the whole judgement to the understanding" (*das Erkenntnisvermögen*, *Logik*, §30). Every judgement is judged with a determinate modality.

Problematische Urteile sind solche, wo man das Bejahen oder Verneinen als bloss *möglich* (beliebig) annimmt. *Assertorische*, da es als *wirklich* (wahr) betrachtet wird. *Apodiktische*, in denen man es als *notwendig* ansieht. (*KrV*, A74-5/B100)

"Problematic judgments are those in which affirmation or negation is taken as merely possible (optional)." The problematic judgement is not a judgement in the modern sense, but it *is* a judgement in the traditional sense: it is the mere act of unifying that is refered to. Immediately following the passage just given, Kant gives examples of problematic judgements: the antecedent and consequent of a hypothetical judgement are problematic judgements. Clearly, we do not make a truth-claim in the antecedent of a hypothetical judgement; we merely apprehend a unity apt for making a truth-claim. The 'judgement' that functions as antecedent is considered merely as an option for judgement in the modern sense. A problematic judgement is a judgement merely in the traditional sense.

When one judges in an assertoric way one judges actually, that is, there is an actual truth-claim. In the apodictic act of judgement, the assertion ('der assertorische Satz') is thought of as determined by the laws of the understanding, and is as such considered as necessary (cf. KrV A76 / B101).

In the *Logik* Kant writes: in a problematic judgement "one does not determine anything about the truth or falsity of a judgement"; in the assertoric judgement "one does determine something about [the truth or falsity of a judgement]"; and in the apodictic judgement "the truth of the judgement is expressed with the dignity of necessity" (§30).

c. An Interpretation of Kant's modal notions

The Kantian modalities may be interpreted as acts (or attitudes) in which we put forward our relation to the truth of the judgement candidate, that is, to its knowability. The problematic judgement may be interpreted as the apprehension of the judgement candidate. In the problematic judgement we merely understand what has to be done to

make the judgement (candidate) known. In the assertoric judgement we take the judgement candidate to be true, that is, knowable, but one does not claim to be able to give a ground, one merely claims that it is possible to find such a ground. Here we deviate from the terminology introduced in section 2, where the assertion act is explained as an actual knowledge claim; following Kant's terminology here, we use 'assertion' in a weaker, modified sense, namely as a claim to truth, that is, to knowability.⁷ In the apodictic judgement the judgement candidate is put forward as known. The judger claims to have a ground for the judgement is a judgement (or assertion) act in the full, unmodified sense. We may conclude that there is something, the judgement candidate, that is first judged as problematic, then as assertoric, and finally as apodictic (cf. *KrV*, B101). The judgement-candidate is thus the bearer of the modalities *knowable* and *known. Apprehended* is strictly speaking not a modality; in the next section it will turn out that the third modality corresponds to *opinion*.

Kant's notion of modality as introduced in the passages given above concerns not alethic, but *epistemic* modality.⁸ It is essential that these modalities concern the truth of the judgement candidate, that is, knowability, and not truth of propositions, which is a non-epistemic notion of truth.

d. Kant on Opinion, Belief and Knowledge

According to Kant, acts of opining, believing and knowing are special cases of problematic, assertoric and apodictic judgings, respectively. The former relate to the latter as an act of knowing relates to claiming to know. For example, I may *use* a judgement candidate as antecedent of a hypothetical judgement, that is, as problematic judgement, for the sake of argument, whereas I firmly believe or even know what is expressed by the antecedent. Acts of opinion, belief and knowledge correspond to different ways in which we relate to a cognitive ground (*Logik*, § IX, cf. *KrV*, A820ff/ B848ff).

⁷ Sometimes Kant uses assertion in the strong sense introduced in section 2: "Ich kann nichts *behaupten*, d.i. als ein für jedermann notwendig gültiges Urteil aussprechen, …" (*KrV*, A822/B850).

⁸ These epistemic modalities should not be confused with $_$ and \diamond of current modal formal logic, cf. Göran Sundholm's contribution to this volume.

"Meinen ist ein mit Bewusstsein sowohl subjectiv, als objektiv unzureichendes Fürwahrhalten. Ist das letztere nur subjektiv zureichend und wird zugleich für objektiv unzureichend gehalten, so heisst es *Glauben*. Endlich heisst das sowohl subjektiv als objektiv zureichende Fürwahrhalten das *Wissen*." (*KrV*, A 822/B850)

Kant takes here (certainly) knowing to be a notion prior to opining and believing. Opining and believing are explained as acts of holding true that are defective. Certainly knowing is a holding true that is adequate ('sufficient') in both a subjective and an objective way; it is thus the judgement as it should be. Certainly knowing is objectively adequate in so far as it is (objectively) grounded, that is, (objectively) certain (*gewiss*); it is subjectively adequate in so far as the judger has conviction (*Überzeugung*). Certain knowledge (as product) (*Gewissheit*) may be the result of a proof, or may not be in need of one (*Logik*, A109). When one has certain knowledge, one is willing to swear an oath.

Believing is objectively inadequate, but subjectively adequate, that is, the judger does not have an objective ground, but he does have a ground that is merely valid for him. Believing is enough for acting. For the merchant it is enough to believe that he will gain profit from a certain action in order to act in accordance with his judgement. He merely has a ground that is valid for him, so that he has conviction, but he knows that this ground is not valid for all. Believing that the accused has actually committed the crime is not enough for a judge in court, though. His judgement should not be merely valid for him; the judge must have certain knowledge (*Logik*, A106).

Opining is not distinguished from believing in degree of conviction or liveliness (*Logik*, A103, note); in opining we neither have an objective ground nor do we have a subjective ground (conviction) that would make us act. If we opine 'Man is mortal' there is a slight preference for this one in contrast to opining 'Man is not mortal'. Kant calls opining a preliminary judging (*ein vorläufiges Urteilen*, *Logik*, A100, A115). Before we know or believe, we often start with putting forward a preliminary judgement $(-\pi)^{9}$

⁹ The Latin terms 'opinio' and 'judicium probabile' are translations of the Greek terms '____' and '_ π ____', respectively.

6. Knowledge, Belief, Opinion and the Epistemic Modalities

As we have seen, for Bolzano, the objectivity of knowledge entirely derives from the objectivity of the truth of a proposition that is independent of any act of judging. The difference between the epistemic acts opining, believing and (certainly) knowing are explained in psychological terms as far as the the act concerns: their difference is expressed merely in terms of confidence and persuasion. On the side of the proposition that is apprehended, there is an important non-psychological difference: what is known has to be true, whereas we may opine or believe what is false. Essential to the Bolzanian explanation of knowledge is that the proposition-in-itself and its truth are primitive notions in terms of which knowledge is explained.

From a Kantian perspective, the act of judgement is a primitive notion, in terms of which other cognitive notions are explained. The act of judgement that is cognitively as it should be is an act of knowing. And the judgement candidate is the bearer of the epistemic modalities. These points make the Kantian explanation of the epistemic modalities more in accordance with the explanation of judgement presented in section 2 than the one given by Bolzano.

We have seen (in section 5.c) that whether we opine, assert or judge apodictically we claim something about the truth (knowability) of a judgement candidate. The question that remains for this section is: What is the object, that is, the product, of these respective acts?

Because Kant does not distinguish between act and product of judgement, we have to elaborate what he says on opining, knowing and believing. For Kant, the act of judgement that is completely as it should be is an act of (certainly) knowing; *Wissen* excludes error. As in Per Martin-Löf's constructivism, in Kant the notion of act of judgement is essential for the account of (absolute) normativity. But, absolute normativity (the judgemental act as it should be) cannot be used for making epistemic distinctions, because an absolute norm is not epistemically accessible: we never know whether our act is identical with the act as it should be. The epistemic distinctions that Kant makes concerning acts of opinion, belief and knowledge do not concern the respective acts, but the *products* of these acts. Certain knowledge is the judgement product as it should be not in an absolute sense, but in an *epistemic* sense. One has certain

knowledge if one has done what had to be done *epistemically*, that is, if the assertioncondition is fulfilled. One's judgement product *Snow is white* is knowledge because it is grounded, that is, one has seen that snow is white. There is no absolute certainty that pertains to one's knowledge. Knowledge as it is used in constructivism is essentially open for reconsideration; this notion of knowledge is thus less strict than Kant's notion of *Wissen*.

We may now reformulate what Kant has said for knowledge as judgemental act in terms of knowledge as judgement *product*. Certain knowledge is the judgement product as it should be in an epistemic sense: it is both objectively and subjectively adequate. It is objectively adequate or objectively certain (*gewiss*), because I have a (cognitive) ground for this judgement product, and, upon having this ground, my judgement is subjectively certain, that is, I am convinced. Such an explanation of knowledge is in accordance with Martin-Löf's explanation of knowledge as grounded (justified, evident) judgement. It is an act of knowing that makes my judgement grounded. The grounded judgement, that is, (a piece of) knowledge, is the product of an act of knowing (cf. Martin-Löf 1987).

In the process of coming to know, one first has a slight preference for the truth of the judgement candidate, for example *Man is mortal*; one starts out with a conjecture towards the correctness of the candidate *Man is mortal*, that is, with opinion. Finally, one is entitled to assert 'Man is mortal', if one has drawn the judgement as a conclusion from the premise 'Man is an animal' together with the premise 'Animals are mortal'. My knowledge that man is mortal is thus the result of an act of inference, that is, a mediate act of knowing. When one understands that man is mortal because of his being an animal, the judgement candidate *Man is mortal* is necessary or apodictic in the sense that it is grounded or known. (Because my judgement is grounded, I have an epistemic obligation. I am no longer allowed to judge the opposite.) The object of apodictic judging is thus the grounded or evident judgement, that is, a piece of knowledge, and not the mere judgement candidate: it is the judgement candidate *Man is mortal* together with its ground.

The object of opining and the object of believing cannot be the judgement candidate together with its ground, for that would make us know instead of having an opinion or a belief. The object of opining and believing is the judgement product

deprived of its cognitive ground. Although acts of knowledge, belief and opinion may have the same judgement candidate, the object of knowing, on the one hand, and the object of opining and believing, on the other, are different. In the case of knowledge the object includes the ground of the judgement candidate; in the case of opinion and belief the object does not include its ground; the judgement product is deficient.

In Aristotle's *Posterior Analytics*, book I, chapter 33 a distinction is made between the object of knowledge (the object as product) and that of opinion (_____), in such a way that it also accounts for our intuition that knowledge and opinion may have something in common (*An. Post.*, 88b30 – 89b9). A large part of the *Posterior Analytics* concerns demonstrative or apodictic knowledge (π ______, π _____), which is necessarily true (*An. Post.*, 73a21-23). The context in which Aristotle introduces the term '_ π _____' is clearly an epistemic one. In what sense does the object of knowledge differ from the object of opinion? *Man is an animal* is an object of knowledge in so far as we apprehend being an animal as an essential attribute of man; we have knowledge in the sense mentioned above because we know *why* man is an animal. *Man is an animal* may also be the object of opinion, in which case being an animal is apprehended as a mere contingent attribute of man. The two objects have the subject *man* in common, but what is said of the subject *man* is not the same (*An. Post.*, 89a34-89b9). Again, what is opined and what is known are not the same, for in the case of knowledge we understand that the object cannot be otherwise because we apprehend it together with its ground.

Concluding, we may say that knowledge is a judgement candidate that is grounded. The judgement has a ground, which makes it objectively certain (*gewiss*); because of its being objectively certain it is accompanied by a feeling of confidence, which makes it subjectively certain (*sicher*). ¹⁰ The term 'objectively certain' means nothing more than *grounded*, which is an epistemic, not an absolute notion. To explain knowledge as evident judgement is to explain it as a grounded judgement candidate. Instead of *belief*, *judgement candidate* is used in the explanation of knowledge.

¹⁰ In a discussion Göran Sundholm mentioned that in Dutch law a proper testimony is called 'wis en zeker'.

Mere belief is a deficient judgement product. It is subjectively certain, so that we may act in accordance with it. But epistemically it is not as it should be, because the ground for the judgement is missing; it is not objectively certain.

Opinion is also a deficient judgement product: in opinion we make a conjecture towards the correctness of the judgement candidate. The preliminary judgement is a specific case of opinion. We put forward a judgement for cognitive consideration, and the result of this act is the preliminary judgement, which is a judgement only in a modified sense. We take up the judgement candidate to see what follows from it, as we often do in a dialectical discussion.

Knowledge, belief and opinion are explained in terms of judgement, but it is misleading to see them as special cases of judgement. Only knowledge is a judgement in the full sense; it is a judgement that is cognitively as it should be. Knowledge is not explained as a special case of opinion or belief; opinion, preliminary judgement and belief are, rather, explained as deprived forms of knowledge. Knowledge, belief and opinion exclude each other, but in the process of coming to know we proceed from opinion to knowledge.

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