

TWO CONCEPTIONS OF THE SYNTHETIC A PRIORI

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Roderick Chisholm appears to agree with Kant on the question of the existence of synthetic a priori knowledge. But Chisholm's conception of the a priori is a traditional Aristotelian conception and differs markedly from Kant's. Closer scrutiny reveals that their agreement on the question of the synthetic a priori is merely verbal: what Kant meant to affirm, Chisholm denies. Curiously, it looks as if Chisholm agreed on all substantive issues with the empiricist rejection of Kant's synthetic a priori. In the end, it turns out that Chisholm disagrees with empiricism *and* Kantianism over a fundamental question: whether mere understanding of the contents of our thoughts must always remain within the circle of our own ideas or can provide us with genuine knowledge of matters of fact.

1. KANT'S A PRIORI

Kant defined a priori knowledge as "any knowledge that is thus independent of experience and even of all impressions of the senses" [1787, B2]. A posteriori, or empirical, knowledge he defined as knowledge that is not thus independent of experience. The notion of independence that occurs in these definitions is intended as a strictly epistemic notion. What is at issue here is whether the epistemic status of someone's belief, its constituting knowledge as opposed to mere opinion, does or does not depend on experience. The psychological question whether one needs (to have had) experience to be able to hold the belief, or to grasp the concepts constituting its content, is not at issue. Kant wanted to count a proposition as known a priori just in case it is known independently of experience other than whatever experience, if any, is required for understanding the proposition. Using the epistemic concept of justification to focus on the epistemic status of a belief, we can rephrase Kant's definition in the following way:

AP_K S knows a priori that p =_{Df} S knows that p and S's justification for believing that p does not depend on experience.

Based on this definition of a priori knowledge, we can introduce talk of a priori propositions as derived from talk about a priori knowledge:

AP *h* is an a priori proposition =_{Df} it is possible that there is some S such that *h* is known a priori by S.

Kant defined a priori knowledge with reference to judgments rather than propositions. I have suppressed this feature of Kant's definitions. It will resurface eventually.

Besides this strictly epistemic notion of the a priori, Kant was also interested in a psychological notion which he characterized with reference to concepts. An a priori concept would be one that is not derived from experience, while an empirical concept would be one that is derived from experience (by some process of abstraction). If a proposition is known a priori in the epistemic sense defined above and if, in addition, all the concepts that enter into the proposition are a priori in the psychological sense, then he calls that proposition a piece of "pure" a priori knowledge. If, on the other hand, some concepts that are empirical in the psychological sense enter into a proposition that is known a priori in the epistemic sense, then Kant calls such a proposition a piece of "impure" a priori knowledge [cf. 1787, B3].

Kant's definition of a priori knowledge will probably not be completely satisfying. Since it is a negative definition, one might complain that it does not really tell us what a priori knowledge is but merely suggests a general direction in which to look for an account that *does* tell us what it is. To say, based on this definition, that a priori knowledge is a *kind* of knowledge seems a bit like saying that not-red is a kind of color. Moreover, since it does not specify what to count as experience, the Kantian account is vague at a crucial point. The type of experience involved in sense perception will count as experience of course. But what about memory and introspection? Most philosophers would agree that if one's knowledge of a proposition depends on memory or introspection, then one does not know it a priori. So memorial "seemings" will count as experiences for the purposes of the definition, even though it is not obvious that they really are experiences in any ordinary sense of the term. Introspective seemings are probably much more like sense experiences than memorial seemings; nevertheless, introspection is still a problematic case because we do not have a very secure grip on what falls under it. Does my knowledge that I exist derive from introspection? And what about my knowledge that I believe something or other? It is hard to tell. Another source of vagueness in the Kantian account of the a priori is its failure to specify what kind of cognitive beings are to be subsumed under S. Only humans? Or should we also subsume (possible) beings with more ideal cognitive powers?

Kant maintained that every necessary proposition can be known a priori by someone. This thesis seems excessively strong unless we count (possible) omnipotent beings among the someones. Maybe he really meant to propose a weaker thesis, namely that every necessary truth that can be known (by beings like us) can be known a priori (by beings like us). Even this weaker thesis is contentious. Kripke and Putnam have argued that we know some necessary propositions, e.g., the proposition

that water is H_2O , that can only be known a posteriori (at least by beings like us). Kant also seems to have held that every proposition that can be known a priori is a necessary truth. This thesis is also contentious. Kripke has argued that some contingent propositions can be known a priori, e.g., the proposition that the Urmeter in Paris is one meter long. And Plantinga has suggested that S can know a priori that she knows a priori that $2+2=4$, yet the proposition that she knows a priori that $2+2=4$ seems contingent.

The points just mentioned raise interesting but difficult issues for the Kantian conception of the a priori. Fortunately, it will not be necessary to make Kant's conception more precise for the purposes of the present paper, nor will it be necessary to take a stance on the relation between a priori knowledge and necessary truth.

2. CHISHOLM'S A PRIORI

Chisholm's conception of the a priori goes back to Descartes and Leibniz and beyond to the Aristotelian tradition. When introducing this conception, Chisholm tends to quote a remark from Leibniz' *New Essays*: "You will find a hundred passages in which scholastic philosophers have said that such propositions are evident *ex terminis*—from their terms—as soon as they are understood" [Leibniz 1981, p. 406]. A definition of a priori knowledge that is based on this characterization will, just like Kant's definition, leave room for impure as well as pure a priori knowledge: whatever experience, if any, is required for understanding a proposition, if understanding it is sufficient for knowing it, then it can be known a priori. However, as Chisholm remarks [cf. 1989, p. 27], the account as stated so far would be too narrow. A satisfactory account should allow for a priori propositions that we know on the basis of others but that are not themselves known as soon as they are understood. Chisholm offers definitions equivalent to the following [cf. 1989, p. 28f.]:

h is axiomatic for S \equiv_{Df} S accepts h , and h is necessarily such that (i) it is true, and (ii) for every S', if S' accepts h , then h is certain for S';

h is known a priori by S \equiv_{Df} there is an e such that (i) e is axiomatic for S, (ii) the proposition, e implies h , is axiomatic for S, and (iii) S accepts h .

These definitions are designed to explain the a priori by way of a two-step approach. Roughly, a priori knowledge is either immediate or it is mediated by an inferential step that is itself immediately a priori and based on something that is immediately a priori. Notice that Kant's conception does not require such a two-step approach. In the Kantian definition, a priori knowledge that is mediated by (derived

from) other a priori knowledge is already taken care of by defining the a priori in terms of what can be known independently of experience.

I wish to contrast the Chisholmian conception of the a priori with the Kantian conception. To make this easier, I will make some relatively minor changes in Chisholm's definition of the axiomatic. I will also repair what seems to be a flaw in his definition of a priori knowledge.

Chisholm does not explicitly invoke the traditional idea that what makes a proposition axiomatic is that *understanding* it is sufficient for knowing it. Instead, he singles out *accepting* as the relevant attitude. However, he explains that his account presupposes the traditional idea. For, one cannot accept a proposition (in Chisholm's sense of accepting) without understanding it, and in the case of propositions that are axiomatic understanding is sufficient for knowing. He also remarks that in order to understand a proposition, in the sense presupposed by his definition, one must grasp what it is for that proposition to be true; the proposition must be one "that you have contemplated and reflected upon" [1989, p. 27]. In the definition to be given below, I will revert back to the more traditional formulation that explicitly refers to the notion of understanding rather than implicitly presupposing it.

Chisholm defines what is axiomatic for S in terms of what is *certain* for S rather than what is *known* by S or what S is *justified* in believing. The reference to certainty is intended to indicate that the kind of justification required for a proposition to be axiomatic is more "exalted" than the kind of justification normally required for knowledge. I will suppress this feature of Chisholm's account. I will say that, according to the Chisholmian conception, a proposition is axiomatic for S just in case it is known by S and is such that understanding it is sufficient for being justified in believing it. This will greatly facilitate the comparison with the Kantian conception. The notion of justification that occurs in both accounts can be taken to be silently restricted to the exalted kind of justification required for certainty.

Chisholm's definitions of the axiomatic and the a priori are not purely epistemic. They are partly metaphysical because Chisholm requires, by definition, that an axiomatic proposition (and hence an a priori proposition) be a necessary truth. Below, I will remove this feature from Chisholm's definitions. Instead, I will assume that Chisholm, much like Kant, supplements his definitions of the axiomatic and the a priori with the additional (contentious) thesis that every proposition that is axiomatic, and consequently every a priori proposition, is a necessary truth. It should be noted that, unlike Kant, Chisholm does not hold that every necessary truth (that can be known) can be known a priori. This difference between the two views will not be relevant to our discussion.

Finally, it seems that there is a flaw in Chisholm's definition of a priori knowledge that needs to be corrected. Chisholm maintains that our axiomatic knowledge is a subspecies of our a priori knowledge, i.e., he claims that whatever is

axiomatic for S is known a priori by S [cf. 1989, p. 28]. But his definition of a priori knowledge does not bear out this claim. It would bear out the claim only if the following assumption were true: Whenever some proposition h is axiomatic for S, then S knows h on the basis of another axiomatic proposition e together with the proposition that e implies h or S knows h on the basis of h itself together with the proposition that h implies h . This is a highly implausible assumption which, moreover, seems to go against the spirit of Chisholm's conception.¹ I will formulate the definition of a priori knowledge so as to avoid this consequence:

AX_C h is axiomatic for S =_{Df} S knows h , and h is necessarily such that for every S', if S' understands h , then S' is justified in believing h ;

AP_C h is known a priori by S =_{Df} either h is axiomatic for S, or there is an e such that e is axiomatic for S, the proposition, e implies h , is axiomatic for S, and S accepts h ;

AP h is an a priori proposition =_{Df} it is possible that there is some S such that h is known a priori by S.

Notice that there is no verbal difference between Chisholm's and Kant's versions of the definition of what it is for a proposition to be an a priori proposition. Of course, underneath this verbal similarity lies a difference in content. The Kantian conception of the a priori employs the idea of "knowledge independent of experience", whereas Chisholm's conception develops the "understanding is sufficient for knowing" idea. In what follows, I will often rely on these short characterizations to simplify the discussion.

3. PURE ANSCHAUUNG

If understanding a proposition is sufficient for knowing it, then mere understanding provides all the evidence that is needed for knowing the proposition, that is, the proposition is known independently of experience. In other words, whatever is known a priori in Chisholm's sense is known a priori in Kant's sense. But what about the converse? Does Kant's a priori imply Chisholm's a priori? Is it the case that whatever is known independently of experience is such that understanding it is sufficient for knowing it? I will suggest shortly that Kant should give a negative answer to this question while Chisholm would give a positive answer. The point, I think, is of some interest. Kant maintained that there is synthetic a priori knowledge, and Chisholm agrees with Kant on this question. If, however, they disagree on the question whether Kant's a priori implies Chisholm's a priori, their agreement about

the existence of synthetic a priori knowledge may be largely verbal; it may mask an important disagreement on what synthetic a priori knowledge amounts to.

It is not hard to see on what grounds someone might maintain that Kant's a priori does not imply Chisholm's a priori. If one thinks that there is some knowledge that does not depend on experience but does depend on something else, X, such that X is not required for understanding the proposition in question, then one will hold that there is a priori knowledge that is Kantian but not Chisholmian. Kant, it seems, held just such a view. It seems that the propositions he regarded as synthetic a priori are just those that, according to Kant, can be known independently of experience while, at the same time, knowing them requires some X that is not required for understanding them. This factor X is of course non-empirical, or "pure", intuition (*reine Anschauung*).

This interpretation of Kant's position depends on a crucial point. For the interpretation to be correct, Kant must not have held that pure intuition is already required for understanding a synthetic a priori proposition. On the contrary, he must have held that it is in principle possible to understand such a proposition without knowing that it is true because one might lack the pure intuition required for knowing it. He must have held, in other words, that pure intuition is an epistemic factor, one that is required for the justification of the synthetic a priori, rather than a psychological factor required for grasping the concepts entering into a synthetic a priori proposition. Unfortunately, Kant was a bit less explicit on this crucial point than I would wish. Let us look at some passages in which Kant talks about synthetic judgments in general and synthetic a priori judgments in particular. It will be helpful to remember that when Kant talked generally about judgments, he usually had in mind judgments of the form "All As are Bs" which he took to be of the subject-predicate form:

Thus it is evident ... that in synthetic judgments I must have besides the concept of the subject something else (X), upon which the understanding may rely, if it is to know that a predicate, not contained in this concept, nevertheless belongs to it. In the case of empirical judgments, judgments of experience, there is no difficulty whatsoever in meeting this demand. This X is the complete experience of the object which I think through the concept A ... Experience is thus the X which lies outside the concept A, and on which rests the possibility of the synthesis of the predicate ... (B) with the concept (A). [Kant 1787, A7-8]

But in a *a priori* synthetic judgment this help is entirely lacking ... Upon what, then, am I to rely, when I seek to go beyond the concept A, and to know that another concept B is connected with it? Through what is the synthesis made possible? Let us take the proposition 'Everything which happens has a cause'... The concept of a 'cause' lies entirely outside the other concept, and signifies something different from 'that which happens', and is not therefore in any way contained in this latter representation. How come I then to predicate of that which happens something quite different, and to apprehend that the concept of cause, though not contained in it, yet belongs, and indeed necessarily belongs, to it? What is here the unknown = X which gives support to the understanding when it

believes that it can discover outside the concept A a predicate foreign to this concept, which it yet at the same time considers to be connected with it? [Kant 1787, B13-14]

Granted, then, we must advance beyond a given concept in order to compare it synthetically with another, a third something is necessary, as that wherein alone the synthesis of two concepts can be achieved. [Kant 1787, B194]

At times—especially at the end of the second passage—Kant’s language may suggest the following picture. Being already in possession of concept A, I cast about for another concept that goes beyond A. With the help of X (experience or pure intuition, as the case may be) I discover, or grasp, or form, a new concept B, one that goes beyond A and that I did not have before. X then enables me to synthesize concepts B and A into a belief that I could not have held before because I lacked one of the requisite concepts. If this is the picture Kant meant to convey, then X is required for understanding the proposition in question and Kant’s conception of the a priori coincides with Chisholm’s conception. But I think that, on balance, the passages above support the alternative interpretation that pure intuition is not logically required for understanding a synthetic a priori proposition. Although Kant does not say so explicitly, his language tends to imply that the predicate concept, B, is already given: we are looking for *a third* something that will effect the synthesis of B with A. Moreover, at two points—at the beginning of the first passage and at the beginning of the second passage—Kant seems to emphasize that the factor X (experience, pure intuition) is required for *knowing* the proposition in question, thereby indicating that X is an epistemic factor required for justification rather than a psychological factor required for belief (or concept) formation. Assuming this interpretation of the role of pure intuition in synthetic a priori knowledge, it follows that the Kantian a priori does not imply Chisholm’s a priori. According to Kant, non-empirical intuition is required for the justification of synthetic a priori propositions but not required for understanding them.

I have already mentioned that Chisholm agrees with Kant, at least verbally, on the question of the existence of a priori knowledge. But nowhere in Chisholm’s work can one find anything like Kant’s account of the synthetic a priori. Chisholm never invokes Kant’s pure intuition or anything like it. In fact, he never invokes anything that would explain synthetic a priori knowledge by going beyond what is already required for understanding a synthetic a priori proposition. The reason for this is, I suggest, that, according to Chisholm’s view, a proposition is a priori in Kant’s sense only if it is a priori in Chisholm’s sense: whatever can be known independently of experience can be known merely through understanding the propositions involved. The Kantian account of synthetic a priori knowledge based on non-empirical intuition is simply excluded by Chisholm’s conception of the a priori. Since Chisholm nevertheless affirms the existence of synthetic a priori knowledge,

he must either have an alternative account of the synthetic a priori or he must have a conception of *syntheticity* that differs from Kant's conception. We will see that there is a bit of both of these alternatives in Chisholm's view on the synthetic a priori.

4. LEWIS' CONCEPTION OF THE SYNTHETIC A PRIORI

In *An Analysis of Knowledge and Valuation*, we find C. I. Lewis characterizing the analytic and the a priori in the following words:

Traditionally a statement which can be certified by reference exclusively to defined or definable meanings is called *analytic*; what is non-analytic being called *synthetic*. And traditionally that knowledge whose correctness can be assured without reference to any particular experience of sense is called *a priori*; that which requires to be determined by sense experience being called *a posteriori*. [Lewis 1946, p. 35]

There can be no doubt that Lewis' definition of the a priori coincides precisely with Kant's definition and differs from Chisholm's. What about his definition of the analytic? Notice first that Lewis gives an *epistemic* definition of analyticity as what is *certifiable* solely by reference to meanings. This indicates that Lewis' notion of analyticity is not Kant's famous notion of analyticity as conceptual containment for, as we shall see in the next section, the latter is not defined in epistemic terms at all. In fact, it looks like Lewis' analytic is a linguistic version of Chisholm's a priori. According to Lewis, analytic statements are "determinable as true by reference exclusively to the meanings of expressions used" [1946, p. 35]. If we translate this into the language of propositions, we get a characterization of analytic propositions as those that can be known solely on the basis of understanding them, and that is just Chisholm's account of the a priori.²

Lewis, of course, denied the existence of synthetic a priori knowledge while Chisholm affirms it. However, what Lewis denied can hardly be what Chisholm affirms because Lewis understands 'synthetic' in much the same way as Chisholm understands 'a posteriori'. So Lewis' denial of the synthetic a priori comes out as the claim that whatever is a priori in Kant's sense is a priori in Chisholm's sense. And we have seen above that Chisholm seems to share *that* view, although he certainly denies that it expresses the thesis that there is no synthetic a priori. To use obvious abbreviations, Chisholm and Lewis both hold that $AP_K \rightarrow AP_C$. And on this point they both disagree with Kant, or at least with Kant as interpreted in the previous section, since Kant maintained that there is knowledge that is a priori in his sense but not in the Chisholmian sense, i.e., he held that $\neg(AP_K \rightarrow AP_C)$. What we need to find out now is how this thesis relates to the claim that there is synthetic a priori knowledge. And in order to do so, we need to consider Kant's notions of the analytic and the synthetic.

5. ANALYTICITY

Kant gave at least three accounts of the analytic and the synthetic. According to the first account, an analytic proposition is one in which “the predicate B belongs to the subject A, as something which is (covertly) contained in this subject A” [1787, B10]. This definition of analyticity in terms of conceptual containment appears to be applicable only to those propositions that Aristotelian logic classifies as affirmative subject-predicate propositions (“All As are Bs”). Kant did not remark on how one could expand the definition to cover other propositions. Moreover, the definition accounts only for analytic *truth*, even though Kant apparently intended to recognize analytic falsehoods as well [cf. 1787, B193]. The following would be a definition of the analytic and the synthetic that repairs at least the second shortcoming of Kant’s definition:

AN h is analytically true \equiv_{Df} the predicate concept of h is (covertly) contained in its subject concept; h is analytically false \equiv_{Df} the negation of the predicate concept of h is (covertly) contained in its subject concept; h is analytic \equiv_{Df} h is either analytically true or analytically false;

SYN h is synthetic \equiv_{Df} h is neither analytically true nor analytically false.

In these definitions h must be restricted to range only over affirmative and negative Aristotelian subject-predicate propositions. Moreover, the definitions presuppose explanations of what counts as the subject concept of a proposition, what counts as the predicate concept of a proposition, and what counts as the negation of a concept. I will refer to the notions defined above as the *containment* notions of analyticity and syntheticity.

Kant apparently assumed that the crucial relation of conceptual containment could be spelled out in terms of an account of conceptual analysis [cf. 1787, B11]. Such an account would have to comprise (i) a compositional theory of concepts that explains how logically complex concepts are composed of logically simpler concepts, e.g., how C&D is composed of C and D; and (ii) a theory of the individuation of concepts that explains under what conditions concept A is identical with concept C&D, and under what conditions concept D is identical with concept B. Based on the theories of composition and identity of concepts, the analyticity of a proposition of the form “All As are Bs” will be explained in terms of $A=C&D$ and $D=B$. It seems fair to say that Kant did not provide such an account of conceptual analysis.

Kant’s second account defines an analytically true proposition as one whose negation is reducible to an explicit contradiction [cf. 1783, p. 267]. Kant assumed that this second definition coincides with his first definition.

According to Kant's third account, analytic judgments are "merely explicative, adding nothing to the content of the cognition [=piece of knowledge (*Erkenntnis*)]", while synthetic judgments are "ampliative, increasing the given cognition" [1783, p. 266]. What is the relation between this third account and Kant's first account? Kant maintained that what is non-ampliative must coincide with what is containment analytic and what is ampliative must coincide with what is containment synthetic. I disagree. One can, of course, read the non-ampliative/-ampliative distinction in such a way that the equation "ampliative = no conceptual containment" comes out as true by definition. But I suggest that this is not the best way to understand the point of this distinction. Kant tended to think of the ampliative in terms of informativeness, that is, as "what will lead to a genuinely new addition to all previous knowledge" [1787, B14], and it is far from trivial to maintain that whatever is not containment analytic will lead to a genuinely new addition to knowledge. More importantly, it seems that it was really the idea of ampliative (in this sense) a priori knowledge that lay at the center of Kant's concerns. It was only because Kant thought that the somewhat obscure notion of the ampliative could be made more precise in terms of the absence of conceptual containment that he tended to describe himself as being concerned with a priori knowledge that is synthetic in the containment sense of syntheticity.

This view commits me to the following hypothesis: If the containment notion of analyticity turns out to be too narrow to cover intuitively trivial truths, Kant should not have taken this as an occasion to announce the discovery of trivial cases of ampliative a priori knowledge. Rather, he should have taken this as an occasion to drop the equation "ampliative = no conceptual containment". An example may help making this clearer. Strictly speaking, a proposition of the form " $\neg p \vee p$ " is not containment analytic. Should Kant have claimed that this is yet another case of ampliative a priori knowledge? I suggest not. He should rather have admitted, and with good reason, that his explanation of the ampliative in terms of non-containment was inadequate.

It is well known that it is misleading to describe the debate between rationalism and empiricism as the debate about the existence of a priori knowledge. Described this way, the leading empiricists of Kant's time had already admitted defeat. Even Hume acknowledged the existence of a priori knowledge. But the description does injustice to Hume's empiricism. For Hume had maintained that a priori knowledge is somehow not "genuine" knowledge. It does not allow us to go outside of what is immediately given to our own minds because it is concerned merely with "relations of ideas". Genuine knowledge, according to Hume, concerns "matters of fact" in the external world and is always empirical. This distinction between relations of ideas and matters of fact, although of crucial importance to empiricism, is not easy to make precise. Kant attempted to do so with his distinction

between the containment analytic and the containment synthetic. The non-ampliative/ampliative distinction, on the other hand, can be interpreted as Kant's way of marking Hume's distinction merely in terms of the role the distinction is supposed to play in the defense of empiricism. 'Non-ampliative' would then be used to refer to whatever the empiricist can allow to be known a priori without relinquishing empiricism. 'Ampliative' would be used to refer to what the empiricist cannot allow to be known a priori without relinquishing empiricism—roughly, knowledge about the external world.

From this point of view, the non-ampliative/ampliative distinction is more central than the non-containment/containment distinction. The former distinction is supposed to refer, albeit not very informatively, to the line separating what is acceptable to empiricism from what is not. The latter distinction is merely intended as a specific proposal for identifying the "items" that occupy the areas separated by the former. As such the non-containment/containment distinction may be "negotiable". If it turns out to lead to an overly narrow view of what counts as non-ampliative—overly narrow in terms of the role the non-ampliative has to play in the defense of empiricism—then it may be discarded and replaced by another proposal for identifying what is to count as non-ampliative and what as ampliative.

6. A KANTIAN CONCEPTION OF THE SYNTHETIC A PRIORI

We have seen that Kant has at least two ways of stating his thesis that there is synthetic a priori knowledge: in terms of the ampliative a priori and in terms of the a priori that is synthetic in the containment sense. Let me use 'AN' and 'SYN' exclusively for the containment notions of analyticity and syntheticity. Kant's somewhat more obscure Humean distinction between genuinely and not genuinely new knowledge will be marked by 'AMPL' and '¬AMPL'. Using these abbreviations, the first version of Kant's thesis comes out as $\neg(AP_K \rightarrow \neg AMPL)$, while the second version comes out as $\neg(AP_K \rightarrow AN)$. In the previous section I have argued that these two versions of Kant's thesis should not be seen as mere notational variants and that the first version is the more central because it directly, though rather vaguely, expresses Kant's central concern for a priori knowledge that is "genuine" in the sense of Hume's distinction. The second version derives from the additional idea that this vague notion of ampliative knowledge can be spelled out in terms of what is not containment analytic.

Lewis, as we have seen, wanted to express Kant's thesis as the claim that $\neg(AP_K \rightarrow AP_C)$. Even though this has earned him the accusation of confusing the analytic with the a priori,³ it appears we can interpret Lewis' formulation more fruitfully, if we understand it as incorporating an alternative proposal for spelling out what could be meant by non-ampliative knowledge. According to Lewis' proposal, the non-ampliative/ampliative distinction should be spelled out in terms of

Chisholm's a priori/a posteriori distinction. Admittedly, putting it this way is verbally awkward. But we should remember that on Chisholm's conception the a priori is what can be known through mere understanding of propositions (plus what can be known on the basis of what can be known through mere understanding of propositions). And this is a candidate for spelling out the non-ampliative/ampliative distinction that will look promising to Kantians and empiricists alike.⁴

Empiricists and Kantians have a shared interest in drawing the line between a priori knowledge that is acceptable by empiricist standards and a priori knowledge that is not so acceptable; they have a shared interest in trying to make this line a bit more precise. Lewis' proposal should look promising from both points of view for two reasons. First, the notion of what can be known through mere understanding seems to capture Hume's knowledge of relations of ideas as opposed to matters of fact. Knowledge through mere understanding of propositions seems to concern only our thoughts, the contents of our own minds. As such it will not inform us about the external world and does not constitute "genuine" knowledge. Kant by and large agrees with Hume that the theory of understanding is, at bottom, a theory about the thoughts in us and not about the world outside us. So knowledge through mere understanding cannot be ampliative. Also, knowledge that is not "genuine" in the sense that Hume and Kant were aiming at, but still deserves its title as knowledge, must be concerned with what is already implicit in our understanding of our own thoughts. Non-ampliative knowledge must be knowledge through mere understanding.

The second reason why Lewis' proposal may be welcome from a Kantian as well as an empiricist point of view is that it offers an account of the non-ampliative that is less narrow than the account in terms of containment analyticity. As I remarked earlier, the containment notion of analyticity makes it very easy for a proposition to be synthetic, viz. " $\neg p \vee p$ ". Taken by itself this is not a problem. But the identification $AN = \neg AMPL$, and the consequent identification $AMPL = SYN$, seems to make it too easy for a proposition to be ampliative. Surely, many propositions that come out as containment synthetic should fall on the side of Hume's distinction that is concerned with mere knowledge of our own thoughts. The identification $\neg AMPL = AP_C$ would seem to give a much better account of what Kant intended with the notion of non-ampliative knowledge, that is, a better account in terms of the role this distinction has to play in the defense of empiricism.

So Kantians and empiricists may both welcome Lewis' proposal. Of course, the empiricist will go on to deny that there is any synthetic a priori knowledge in the sense of the proposal. She will argue for the claim that $AP_K \rightarrow AP_C$ because she holds, much like Chisholm and Lewis, that "there are no other sources of knowledge than on the one hand data of sense and on the other hand our own intended meanings" [1946, p. 35]. This is where empiricism and Kant part ways. After all, Kant thought

that pure intuition is on the one hand a source of knowledge that is independent of experience but is on the other hand not already involved in our own intended meanings.

7. CHISHOLM'S CONCEPTION OF THE SYNTHETIC A PRIORI

I have in effect argued above that Kant's second way of stating the claim that there is synthetic a priori knowledge, namely in terms of the containment notion of syntheticity, results from a combination of two Kantian thesis: the fundamental thesis that some a priori knowledge is ampliative, and the less important thesis that ampliativeness can be spelled out as containment syntheticity. I have also argued that Kant, or at least a Kantian, may well drop the latter thesis on the ground that it will misclassify as ampliative knowledge that is intuitively not genuine in the Humean sense. Instead, the Kantian may go along with Lewis' proposal and spell out the ampliative in terms of knowledge not attainable through mere understanding, that is, in terms of Chisholm's conception of the a posteriori. If our Kantian thus identifies the ampliative with Chisholm's a posteriori, he will of course deny the claim that what is a priori in Chisholm's sense is exhausted by what is containment analytic.

Chisholm affirms the existence of synthetic a priori knowledge. But we have already seen that Chisholm, just like an empiricist, denies that there is a priori knowledge in Kant's sense that is not a priori in Chisholm's sense. So in terms of the Kantian conception outlined in the previous section, Chisholm denies the existence of the synthetic a priori because, like the empiricist, he is not a friend of Kant's pure intuition. What, then, does Chisholm affirm when he says "there is synthetic a priori knowledge"?

As we will see later on, Chisholm embraces an account of the analytic/-synthetic distinction similar to the containment account given in section 5. That is, Chisholm adopts the containment notions of analyticity and syntheticity. Consequently, his claim that there is synthetic a priori knowledge comes out as the claim that not all knowledge that is a priori in Chisholm's sense is containment analytic. This creates a curious situation: it looks as if on the substantive issues Chisholm is in perfect agreement with empiricism and opposed to Kant. His only disagreement with empiricism seems to be over the verbal issue whether the thesis that the Chisholm a priori is not exhausted by the containment analytic should be taken to express Kant's famous claim. Chisholm seems to be saying that it should, whereas for the empiricist, as well as the Kantian described above, this thesis expresses merely the claim that the containment analytic offers too narrow an account of the non-ampliative.

Is Chisholm then really an empiricist at heart? Is his disagreement with empiricism merely verbal? I think not. For Chisholm disagrees with the empiricist and our Kantian over the question whether the non-ampliative should be identified

with Chisholm's a priori, that is, they disagree over Lewis' proposal. I think a chart will be welcome to make the various positions more perspicuous. The chart assumes that the empiricist and our Kantian have adopted Lewis' proposal as described in the previous section. Hume will have to do duty (somewhat anachronistically) for our generic empiricist:

	$AP_K \rightarrow AP_C$	$AP_C \rightarrow AN$	$AP_C = \neg AMPL$
Kant	No	No	Yes
Hume	Yes	No	Yes
Chisholm	Yes	No	No

Looking only at the first two columns one might indeed conclude that Chisholm's disagreement with Hume is merely verbal. However, the crucial third column shows that Chisholm disagrees with Hume as well as with our Kantian over Lewis' proposal to identify the non-ampliative with the a priori in Chisholm's sense. Remembering Chisholm's conception of the a priori, we see that their disagreement is over the question whether knowledge that derives from mere understanding must be non-ampliative. And this is a substantive and even fundamental issue. Chisholm maintains, in opposition to Kant and Hume, that our grasp of our own concepts will furnish us with genuine knowledge about matters of fact.

8. KANT'S PRINCIPLE

Kant tended to argue for the need of pure intuition along the following lines: "The proposition that every event has a cause is not containment analytic, that is, it is containment synthetic. Therefore, it is ampliative. What then is the basis of our knowledge of the law of causation? Since the law is necessary and known a priori, our knowledge cannot derive from experience in this case. But since our understanding of our own concepts can yield only non-ampliative knowledge, our knowledge of the law cannot be based on concepts either. Hence, there must be a third source of knowledge: pure intuition" [cf. 1787, B64-65].

The first step in this reasoning relies on Kant's original identification of the containment synthetic with the ampliative. But the step is not really essential to the argument for pure intuition. Kant may well have adopted Lewis' proposal and put the first step of the argument like this: "The causal law is a priori but our knowledge of it does not derive merely from understanding what it says. Therefore, it is ampliative." This reformulation would have been just as convincing to Kant, for what it does is point out what Kant really wanted to point out, namely that the law of causation does not concern Hume's relations of ideas but matters of fact. The crucial step in the argument comes rather with the claim that our understanding of our own concepts cannot yield ampliative knowledge:

As regards the first and sole means of arriving at such knowledge [of theorems of geometry], namely, in *a priori* fashion through mere concepts or through intuitions, it is evident that from mere concepts only analytic knowledge, not synthetic knowledge, is to be obtained. [Kant 1787, B64-65]

Naturally, Kant does not specify which meaning of ‘analytic’ and ‘synthetic’ he has in mind. But as I have tried to show, the primary point Kant wanted to make in his argument for the need for pure intuition is that our knowledge of the law of causation and the theorems of geometry and arithmetic does not derive merely from our understanding of the propositions involved. So the crucial step in Kant’s argument for pure intuition is

Kant’s Principle: From mere concepts only non-ampliative knowledge, no ampliative knowledge, is to be obtained.⁵

The principle helps us to understand the table in the previous section. Hume and Kant both accept Kant’s principle. For them it expresses the almost trivial point that our grasp of our own concepts cannot lead us beyond relations of ideas to matters of fact. Twentieth century logical empiricism put this point in terms of meanings and conventions: grasp of meanings cannot lead us beyond our own conventions to matters of fact about the external world. This signifies a shift of focus away from the content of thought to the content of language, but the basic adherence to Kant’s principle remains. Of course, all empiricists reject Kant’s addition to the sources of knowledge. They reject pure intuition and maintain that the propositions Kant took to be *a priori* and ampliative are really *a priori* and non-ampliative. Chisholm, too, rejects pure intuition. But he also rejects Kant’s principle. On his view, Kant’s principle implies a deeply mistaken view that must quickly lead into some unacceptable form of psychologism or linguistic conventionalism about necessary truth. On Chisholm’s view, the knowledge that can be obtained from “mere concepts” is as factual as any other knowledge about “matters of fact”.⁶

9. CHISHOLM’S PRE-KANTIAN RATIONALISM

Earlier I mentioned that Chisholm embraces a conceptual containment account of the analytic/synthetic distinction similar to the one given in section 5. It has now turned out that allegiance to the containment notion of analyticity is essential to Chisholm’s position. If, like our empiricist and our Kantian, he were prepared to remove containment analyticity from its prominent place on the grounds that \neg AMPL is more fruitfully spelled out in terms of AP_C, Chisholm’s position would collapse. So it is time to take a look at Chisholm’s account of the analytic. This look will also reveal what Chisholm regards as the basis of all *a priori* knowledge, analytic as well as synthetic.

Chisholm gives a schematic definition of analyticity for Aristotelian subject-predicate propositions [1989, p. 34]:

AN_C The proposition that all Fs are Gs is analytic =_{Df} The property of being F is conceptually equivalent to a conjunction of properties, P and Q, such that: (i) P does not imply Q, (ii) Q does not imply P, and (iii) the property of being G is conceptually equivalent to Q.

This definition really defines analytic truth. Analytic falsehood can be defined by substituting “the property G is conceptually equivalent to the negation of Q” in clause (iii). The synthetic will be defined as what is not analytic (neither analytically true nor analytically false). The notion of property implication is explained in the following way: the property P implies the property Q just in case P is necessarily such that if something exemplifies it then something exemplifies Q. The definition given above makes clear that Chisholm’s containment analytic is just as narrow as Kant’s. However, on Chisholm’s view, this is of little consequence. There is no reason to worry that the containment analytic may give too narrow an account of the non-ampliative and make it too easy for a proposition to be ampliative. Once Kant’s principle is denied, the Kantian *cum* Humean understanding of the non-ampliative/-ampliative distinction in terms of “relations of ideas” versus “matters of fact” loses its foothold: all a priori knowledge, be it synthetic or analytic, is equally concerned with matters of fact. We will be able to see this more clearly, when we look into Chisholm’s brand of rationalism.

The explication of the notion of conceptual equivalence that is crucial to Chisholm’s definition of analyticity will lead us to one of Chisholm’s most central notions:

P is conceptually equivalent to Q =_{Df} P entails Q, and Q entails P;

The property of being F entails the property of being G =_{Df} The property of being F is necessarily such that whoever believes something to be F believes something to be G.⁷

Property entailment is one of the central notions of Chisholm’s “intentional approach to ontology” developed in a number of publications that appeared in the 1980’s. In these publications, Chisholm uses the metaphysical notion of necessity and property exemplification together with two primitive intentional notions to define relations between properties and propositions or states of affairs. The primitive intentional notions are usually the relation of *conceiving* that obtains between a subject and a property and the relation of *attributing* that obtains between

a subject a property and an object (at times attributing is replaced by *believing something to be F*). Properties are defined as essentially attributable, although their existence does not depend on actually being attributed by anyone to anything: P is a property \equiv_{Df} P is possibly such that there is someone who attributes it to something. The intentional approach to ontology offers (i) a theory of the logical structure of properties which defines negative properties, conjunctive properties, disjunctive properties, etc., and (ii) a theory of the identity conditions of properties (sometimes replaced by conditions for conceptual equivalence). In short, Chisholm's intentional approach attempts to provide what Kant failed to provide for his containment notion of analyticity: an account of conceptual analysis.⁸

One should not, however, be misled by the term 'conceptual' in 'conceptual analysis'. Chisholm's brand of conceptual analysis is a theory of mind- and language-independent properties (and propositions or states of affairs) and the modal and intentional relations that obtain of necessity among them and between them and us. I mentioned earlier that Kant framed his definitions of the a priori and the analytic with reference to judgments rather than propositions. We can now see this as another symptom of the difference between his approach and Chisholm's. To Chisholm, Kant's reliance on the notion of a judgment will suggest that Kant's thought on necessity, the a priori, the analytic, and on conceptual analysis was infected by psychologism. Kant's 'judgment' refers either to a psychological act or it refers confusedly to a mixture between psychological act and objective content, a mixture that requires sorting out. Chisholm's approach attempts to do that. It analyses talk of concepts and judgments into talk of intentional relations (grasping, attributing, believing) and objective properties and propositions (or states of affairs). Intentional relations are "externalist" in the sense that they relate cognitive subjects to (abstract) external objects existing independently of any cognitive subjects and their relations to them. Internal, or narrow, psychological states and acts have no role to play in this approach. The intentional approach to ontology attempts to keep clearly in view the lines separating the narrowly psychological from the intentional and the ontological.

At the core of the intentional approach to ontology lies a principle that ties the intentional relation of property entailment to the purely ontological relation of property implication:

CPR₁ If F entails G, then F is necessarily such that, if something exemplifies F then something exemplifies G, i.e.,
If F entails G, then F implies G.

Often Chisholm also introduces a concept of property entailment narrower than the one defined above, which gives rise to another principle tying an intentional relation to a purely ontological relation:

F n-entails G \equiv_{Df} F is necessarily such that, for every x, whoever attributes F to x attributes G to x.

CPR₂ If F n-entails G, then F is necessarily such that, whatever exemplifies F exemplifies G, i.e.,
If F n-entails G, then F includes G.⁹

I have labeled these principles “CPR” for “Chisholm’s Platonist Rationalism” because they express the Platonist idea that our intentional access to properties provides us with access to objective features of all possible worlds. However, for a full account of what I take Chisholm to see as the source of our knowledge of analytic as well as synthetic a priori truths, we need a further principle, a principle that identifies our access to objective properties and their necessary relations as a privileged form of *epistemic* access:

CPR (a) F entails/n-entails G iff we can know a priori in Chisholm’s sense that F entails/n-entails G;
(b) CPR₁ and CPR₂ can be known a priori in Chisholm’s sense.

The principle tells us that we can know property entailments merely on the basis of our understanding, or grasp, of the properties involved. It also tells us that this a priori knowledge of intentional relations between properties yields a priori knowledge of non-intentional relations between properties. I do not know whether Chisholm has ever explicitly stated such a principles. But it seems that CPR, or some principle like it, is required to make sense of Chisholm’s position in the debate about the synthetic a priori. The three CPR principles locate the source of all our a priori knowledge in our intentional access to objective properties and their relations. The distinction between the synthetic a priori and the analytic a priori requires no additional epistemic basis. In some cases, the analytic ones, the entailment relation between two properties A and B reduces to an underlying entailment between C and D because A=C&D and D entails and is entailed by B. In other cases, the synthetic ones, the entailment is irreducible. In both cases, our a priori knowledge of the entailments is based on our intentional access to the properties involved. Chisholm’s Platonist rationalism is, then, closely related to Bolzano’s view on the synthetic and the analytic a priori:

What justifies the understanding to attribute to a subject A a predicate B which does not lie in the concept A? Nothing I say but that the understanding *has* and *knows* the two concepts A and B. I think that we must be in a position to judge about certain concepts merely because we have them. For, to say that somebody has certain concepts A, B, C, ... surely means that he knows them and can distinguish

them. ... Since this holds generally, it also holds in the case when these concepts are simple. But in this case the judgments which we make about them are certainly synthetic. [Bolzano 1837, p. 347]

10. CONCLUSION

I have described two conceptions of the synthetic a priori: Chisholm's conception and a Kantian conception. Chisholm rejects the Kantian conception because, like the empiricists, he sees no need for pure intuition as a third source of knowledge: experience and understanding are sufficient. But Chisholm rejects empiricism as well. For, according to Chisholm, our understanding of our concepts reaches beyond the circle of our own ideas and provides us with genuine knowledge of matters of fact. Kant and the logical empiricists all agreed with Hume that the theory of the contents of our thoughts is ultimately a theory about our own psychology or about our own intended conventional meanings. They all accepted the argument, sketched in section 6 and later compressed into Kant's principle, that knowledge through mere understanding cannot be genuine, or ampliative, because it can never reach beyond the relations of our own ideas to the external world. Chisholm rejects this argument and rejects Kant's principle: knowledge through mere understanding of our thoughts concerns matters as factual as anything.¹⁰

Notes

1. The context of Chisholm's definition of a priori knowledge suggests that he intends it to spell out the idea that some a priori propositions are known *on the basis of* axiomatic propositions (cf. 1989, p. 28f.). However, Patricia Blanchette has reminded me that the definition itself does not make use of this talk and is, consequently, not committed to the assumption I described in the text. Nevertheless, the definition is committed to the following implausible assumption: *h* is axiomatic for S, only if S accepts that *h* implies *h* or accepts that *e* implies *h* for some *e* other than *h*. Remember that Chisholm's acceptance requires that one has contemplated the proposition in question and relected upon it.

2. This is a slight oversimplification. Speaking more precisely, Lewis' analytic can be regarded as a linguistic version of Chisholm's a priori, provided Lewis really had the following definition in mind: A statement is analytic just in case it is certifiable solely by reference to meanings or is derived from a statement certifiable solely by reference to meanings via an inference that is certifiable solely by reference to meanings.

3. From Pap [1958, pp. 97-103] who interprets Kant's conception of the a priori in terms of Chisholm's conception.

4. Lewis is not the only philosopher to make "Lewis' proposal". Mill seems to have anticipated it. He distinguishes between "real" and "verbal" propositions and says of the latter that they "convey no information to anyone who previously understood the whole meaning of the terms" [1872, p. 113]. In a footnote he remarks that his real/verbal distinction is meant to correspond to Kant's analytic/synthetic distinction, thereby indicating that he thinks of the latter primarily in terms of the non-ampliative/ampliative distinction [cf. 1872, p. 116]. To give a much more recent example, Paul Boghossian [1995] argues that the only tenable notion of the analytic is one that is at bottom epistemic. He defines a statement to be analytic just in case mere grasp of its meaning suffices for being justified in believing it. This is of course exactly what I have called Lewis' proposal. Boghossian, just like Lewis, thinks that the containment notion of the analytic is untenable and should be replaced by (a linguistic version of) Chisholm's a priori. Boghossian's emphasis on the epistemic nature of his notion of analyticity indicates that he is primarily aiming to spell out the difficult distinction between the non-ampliative and the ampliative.

5. The crucial role played by what I call "Kant's Principle" in Kant's argument for pure intuition is emphasized in Coffa [1991, pp. 17ff.].

6. Lewis, by the way, argues against linguistic conventionalism about necessary truth. Although he is usually regarded as one of the eminent empiricists of the era, his views on a priori knowledge have more in common with Chisholm's than with the views characteristic of logical empiricism [cf. Lewis 1946, ch. vi].

7. See Chisholm [1989], p. 33. The definition of conceptual equivalence given in the text does not correspond to the one given by Chisholm. But evidence from the context (pp. 33-35) shows, by my lights conclusively, that Chisholm's version is a misprint. I have given the definition that Chisholm must have intended to give.

8. See Chisholm [1981], [1982], [1986], [1989], and [1996].

9. For CPR_1 , see Chisholm [1989], p. 51. For the definition of what I have called "n-entails" and for CPR_2 , see Chisholm [1982], p. 144. Interestingly, Chisholm tends to not emphasize the CPR principles very much.

10. In recent years Chisholm has tended to state the most basic definition of his intentional approach to ontology by making use of schematic predicate letters; see [1996, ch. 2]. This has the consequence that subsequent definitions that allow for quantification over properties cannot ultimately be interpreted as allowing for *objectual* quantification over properties. Their "property variables", it seems, must be understood along the lines of a *substitutional* interpretation of quantification. This incorporates a linguistic element into the core of Chisholm's intentional approach to ontology. Whether this signals a move away from strict Platonism and towards a more linguistic understanding of properties I do not know.

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