Kant on Analytic Judgements

Nicholas Currie

University College London

Submitted for the degree of

MPhil Stud. Philosophical Studies

DECLARATION

I, Nicholas Currie confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

ABSTRACT

In this thesis I will present and defend an interpretation of Kant's remarks on analytic judgements in his critical-era texts. Specifically, I will argue that, of the four characterisations of this class of judgements which Kant presents in the *Critique of Pure Reason*, it is those in terms of (i) conceptual containment and (ii) the identity of concepts (both at A6-7 / B11) which are fundamental, mutually supportive and capable of explaining the other characterisations. In order to motivate this interpretation against long-standing objections, I follow de Jong (1995) and Anderson (2005, 2015) in urging that Kant's talk of conceptual containment and identity should be understood on the model of similar locutions as they feature in the term logics of his rationalist predecessors, in particular those of Leibniz and Wolff. Furthermore, I will argue that in much the same way that the rationalist models of inter-conceptual containment and identity are used by Leibniz and Wolff to explain the truth of all propositions in purely intensional terms, Kant's mirror-image account of analytic judgements renders the a prioricity of said judgements a function of just such intensional characteristics. In the second chapter, I will contextualise this interpretation within Kant's broader account of theoretical judgement in the *CPR* by explaining the way in which he is able to commensurate this commitment to intensional containment and identity relations with his further commitment to the possibility of distinctively synthetic judgements. In the third and final chapter, I will propose that, for Kant, analyticity is an epistemological property of select judgements, not that which renders those judgements true. In other words, I will urge that for Kant analytic judgements are *not* true in virtue of concepts but, rather, that their truth is merely knowable a priori by means of the containment and exclusion relations which hold between their constituent concepts.

CONTENTS

1 – KANT'S ACCOUNT OF ANALYTIC JUDGEMENTS

1.1 THE INTERPRETATIVE PROBLEMATIC AND KANT'S QUADRIPARTITE CHARACTERISATION OF ANALYTIC JUDGEMENTS

When Kant announces the distinction between analytic and synthetic judgements at A6-7 / B10-11, he presents not one, but three, seemingly distinct characterisations of analyticity. First we are told that analytic judgements are those

(A) 'in which [...] the predicate B belongs to the subject A, as something which is (covertly) contained in this concept A'.[1]

Immediately following this we are informed that analytic judgements are those

(B) 'in which the connection of predicate with the subject is thought through identity.'

We are then told that the distinction between analytic and synthetic judgements can be marked by the fact that

(C) '[Analytic judgements], adding nothing through the predicate to the concept of the subject […] can also be entitled explicative. [Synthetic judgements], on the other hand, add to the concept of the subject […]; and they may therefore be entitled ampliative.'

What is more, Kant – ever the glutton for elaborate, technical clarification – continues to present what appears to be a further, fourth characterisation of analyticity at A151 / B191, which he describes as 'the universal and completely sufficient *principle of all analytic knowledge*'.[2, 3] He writes that, for any given analytic judgement,

(D) 'whether negative or affirmative, its truth can always be adequately known in accordance with the principle of contradiction.'

[1] All quotations from CPR in English are taken from the 2007 Macmillan edition of Norman Kemp Smith's translation. Original German quotations are taken from the 1955 Felix Meiner edition.

[2] Emphasis present in original text.

[3] Kant makes the same claim in §2.b of the *Prolegomena*: 'The Common Principle of All Analytic Judgements is That of Contradiction.'

Obviously, if we are being charitable to Kant we will want to interpret these characterisations as commensurable. Furthermore, if these characterisations could be made to agree with one another we may be in a better position to identify a singular conception of analytic truth in the *CPR*, something which surely anyone seeking a maximally charitable interpretation of the text should be desirous of identifying. But what makes this interpretative challenge so formidable is the fact that characterisations (A) and (B), i.e., the containment and identity characterisations, seem to provide a different kind of account of analytic judgements from characterisations (C) and (D), i.e., the characterisations cashed out in terms of the explicative/ampliative distinction and the principle of contradiction respectively. Specifically, characterisations (A) and (B) appear to be attempts by Kant to provide an account of what it is about analytic judgements which explains why it is that they can be known a priori to hold of necessity. Meanwhile, characterisations (C) and (D) would seem to provide mere criteria by means of which one might identify an analytic judgement as such.

Obviously one response to this issue could be to urge that no interpretative dissonance need follow. One could argue that the two types of characterisation can be shown to be compatible. To be more precise, one could aver that whilst characterisations (A) and (B) explain why they have the special modal and epistemic properties that they do, characterisations (C) and (D) identify features of such judgements which they possess as a consequence of their having the logical characteristics identified by (A) and (B). On such a model, (A) and (B) could be seen as explaining the analyticity of analytic judgements whilst (C) and (D) merely help to identify in any given case which judgements count as analytic. Any such a reading would render Kant's four characterisations consistent with one another, and so could be characterised as a *unified* reading.[4]

In spite of the obvious appeal of any such an interpretation, doubt has frequently been cast about the viability of unified readings. Various objections have been raised to the effect that characterisations (A) and (B) are themselves unable to fulfil the function that a unified reading would require of them. These

[4] Anderson (2015) describes such a reading as granting '*definitional* priority' (p. 16) to one characterization, with 'the further properties of analyticity [being] derived as consequences of [it]' (p.17).

objections come in two different kinds. The first are those which argue that the differentia identified by (A) or (B) fail to provide a satisfactory explanatory account as to why analytic judgements *invariably* hold as necessarily true. I shall refer to these as *definiciency objections*. Most notable amongst the various forms of this kind of objection are those commonly associated with Quine (1961) which urge that the notions of conceptual containment or conceptual identity are 'merely metaphorical'.[5]

These objections certainly have some intuitive appeal. What could Kant possibly mean when he writes that one concept is '(covertly) contained' within another or, as Kant does in the *Metaphysics Mrongovius*, that the predicate concept of an analytic judgement can be 'identical in part' (Ak. 29:789) with the subject concept?[6] Of particular concern here is the fact that mereological distinctions are paradigmatically construed as spatial or temporal, something that by Kant's lights concepts are precluded from being.[7] But if concepts cannot be spatiotemporal, it would seem that Kant's talk of "parts" of concepts must be metaphorical and thus that it is problematic for Kant to 'speak in this way […] of parts and wholes' of concepts.[8] The lack of any clear account of what Kant means by his use of this mysterious merelogical language makes it very hard to see how, by means of it he might be motivating a substantive account as to why analytic judgements hold of necessity.

The second kind of objection is that aimed specifically at the effectiveness of characterisations (A) and (B) as accounts of the grounds of analyticity. More specifically, these objections urge that one or other of these characterisations is incapable of providing a principled basis for the objective dichotomous classification of all judgements into those which are analytic and those which are synthetic. I shall refer to these as *subjectivity objections*. Most prominent amongst reproaches of this kind are those attacking characterisation (A). Such objections originate with J.G. Maaß, a contemporary critic of the *CPR*, and

[5] Most notably, Quine expresses this objection to Kant's distinction in his enormously influential paper 'Two Dogmas of Empiricism' (1961), p.20–1.

[6] Kant, I. (1997 [1782-3]) 'Metaphysics Mrongovius' in *Lectures on Metaphysics* (trans. Ameriks & Naragon), p.144

[7] One of the most notorious of the doctrines of the first Critique is that space and time 'belong only to the form of intuition' (A23 / B38). Another is that concepts and intuitions are categorically heterogeneous but both required for knowledge (A50-2 / B74-6). It follows, therefore, that concepts cannot be spatiotemporal for Kant.

[8] de Jong, Willem (1995) 'Kant's Analytic Judgements and the Traditional Theory of Concepts', p.627

have continued to find expression in attacks on Kant's formulation of the analytic/synthetic distinction even as recently as the late twentieth and early twenty-first centuries.[9] Maaß objects that the notion of concept containment is too problematically bound up with the contingent psychological states of individual judging subjects to provide the foundations for objective dichotomous classification. As Maaß observes, one subject, s_1, could 'think more on a given concept'[10] than another, s_2, meaning that for s_1 a judgement involving that concept could be analytic, whilst for s_2 that same judgement would be synthetic.

Concerns engendered by these two types of objection to characterisations (A) and (B), coupled with the suspicions concerning the commensurability of the four characterisations, have led to a general loss of confidence in the viability of unified readings in the recent scholarship. Many interpreters of the *CPR* are inclined to reject both conceptual containment and conceptual identity as plausibly providing a robust account of the nature of analyticity in the hope that doing so they might save Kant from the charge of resting his all-important distinction between analytic and synthetic judgements on indeterminate definitions. However, these interpreters are still reluctant to write off the Kantian formulation of the analytic / synthetic distinction as ineliminably problematic. In particular, they are cognisant of the fact that Kant requires this distinction in order to mobilise his further contrast between synthetic *a priori* and empirical knowledge.[11]

However, without the option of construing analyticity in terms of either of the characterisations which could provide an account of what grants analytic judgements their special modal and epistemic properties, these interpreters are forced to lean heavily on the merely criterial characterisations, i.e., (C) and (D). In this spirit, Allison favours reading characterisation (C), the explicative / ampliative characterisation, as the principal characterisation of analyticity in the *CPR*. Furthermore, he urges that yet more evidence of the primacy of (C) is to be found in the *Prolegomena* where characterisation (C) receives top billing (unlike in the *CPR* where (A) is treated as primary).

---

[9] Both Bennett (1966) (p.5) and Van Cleve (2003) (pp.18-19) rehearse Maaß-style objections.

[10] Maaß, J.G. (1789) 'Über den höchsten Grundsatz der synthetischen Urtheile; in Beziehung auf die Theorie von der mathematischen Gewißheit.' *Philosophisches Magazin* 2 (trans. Allison (1973), p.42).

[11] Cf. Allison, H. (2004) [1983] *Kant's Transcendental Idealism*, p.91, 94

Similarly, in his *Problems from Kant* (2003), James Van Cleve argues in favour of the primacy of characterisation (D), i.e., the principle of contradiction characterisation. This reading is starkly minimal, reducing the positive characterisation of analyticity that can be extracted from the text to almost nothing. On this interpretation, all that remains once Kant's more (supposedly) spurious remarks on analyticity have been excised is the bare negative formulation of a necessary condition that holds of all analytic judgements:

'A is analytic iff its opposite, ¬A, is a contradiction.'[12]

That such interpretations are considered appealing by many, in spite of the extent to which they are forced to discard large swathes of Kant's positive remarks on analyticity, demonstrates the perceived severity of the deficiency and subjectivity objections to the containment and identity characterisations, i.e. (A) and (B). However, the converse appeal of rehabilitating Kant's quadripartite characterisation and defending a workable unified reading of the text that is able to effectively handle these objections is still great, and must surely remain the favoured approach of any charitable reader of Kant's remarks on analyticity in the *CPR*.

For this reason, it is perhaps not surprising that there have recently been various attempts to defend workable interpretations of both characterisations (A) and (B) which might be able to motivate a new unified reading. Both characterisations clearly show promise. However, I would urge that there is clearly a textual bias in the *CPR* in favour of one of these two characterisations. Most obviously, when the analytic/synthetic distinction is announced in the introduction to the *CPR*, it is (A), the *containment* characterisation, which is given top billing with the further three characterizations, (B), (C) and (D) appearing to serve as elaborations rather than alternative definitions. Additionally, at (A7 / B10) when the identity characterisation is introduced for the first time, Kant's presentation suggests that he intends for it to function as an elucidation of what exactly he means by this elliptical talk of conceptual containment; not as a freestanding definition. Directly after having distinguished analytic from synthetic judgements on

[12] Van Cleve, J. (2003) *Problems from Kant*, p.20

the basis of the former class of judgements involving containment relations between its terms, Kant writes 'Analytic judgements (affirmative) are *therefore* those in which the connection of the predicate with the subject is thought through identity.'[13]

With these textual considerations in mind, it seems reasonable to suggest that we have good reason to favour a unified reading based on the characterisation (A), rather than one in terms of characterisation (B). However, this is only tentative. In order to find more substantive grounds for favouring (A), let us begin by briefly delaying considering the possibility that a new unified reading which favours the identity characterisation might be more tenable and instead turn our attentions to those which favour Kant's characterisation in terms of containment.

1.3 – THE CONTAINMENT-EXCLUSION CHARACTERISATION

Given the severity of the objections to the containment characterisation presented in the previous section, the two crucial questions that any defensible unified reading built around (A) will have to answer are as follows: (i) 'how can the notion of conceptual containment be shown to be substantive (i.e. not merely metaphorical)?' and (ii) 'how can the containment relations between the terms of analytic judgements be shown to be objective properties of those judgements (i.e. not merely subjective psychological projections of the judging subject)?'

However, there is yet another difficulty facing any attempt to construct such a reading in terms of Kant's notion of containment; namely, that isolating a more muscular account of containment based on remarks in the *CPR* alone is not an option. Therein, Kant's remarks on the matter are minimal in number, brief in length and oblique in content. In fact, aside from the remark from A6 / B11 quoted above, Kant makes no other *explicit* reference to containment at any point in the text, making the

[13] My emphasis. In the original German, the implication that (B) follows from (A) is no less clear, with the German 'also' marking as a consequence of something which has previously been stated the fact that analytic judgements are those 'in welchen die Verknüpfung des Prädikats mit dem Subjekt durch Identität'. The only plausible candidate which could stand as the antecedent to this claim is the assertion that 'das Prädikat B gehört zum Subjekt A als etwas, was in diesem Begriffe A (versteckterweise) enthalten ist'.

prospect of being able to attribute to Kant a full-blooded conception of containment with anything like substantial textual support from the *CPR* fairly bleak.

Of course, if Kant's talk of concepts containing one another were found to be an entirely novel contribution to either early modern logic or early modern ideas about the nature of judgement, those hoping to motivate a more muscular reading of the containment characterisation of analyticity would, on the basis of the dearth of any substantive characterisation of containment in Kant's text, be hard pressed to do so. However, as de Jong (1995) and Anderson (2005, 2015) have recently indicated, there is a clear precedent for the use of this and other, similar locutions regarding the relations between concepts to be found in the rationalist discussions of logic which preceded Kant's development of his critical philosophy. What's more, these scholars argue that it is clear from Kant's pre-critical texts and the various compendia of remarks on logic transcribed from his lectures and compiled from his Reflexionen that Kant himself was also both familiar with these rationalist doctrines and in various ways heavily influenced by them. For these reasons, both have attempted to respond to the deficiency and subjectivity objections outlined above by explaining containment on the model of the Leibnizian and Wolffian logics of concepts and have consequently proposed new, more robust, unified readings of the text built around the containment characterisation.

Central to these readings is the notion that rationalist logics explain the inferential relations that hold between propositions in terms of conceptual *contents*.[14] According to the rationalist model for

[14] Both Leibniz and Wolff's preferred name for a truth-evaluable compounds of concepts is 'proposition'. This is in contrast with Kant who prefers the term 'judgement' for all truth-evaluable thoughts and assertions. On this basis, one might be sceptical about drawing an equivalency between the Leibnizian/Wolffian notion of the proposition and the Kantian notion of a judgement. One might, perhaps, be concerned that doing so would paper over any important though concealed differences. However, whilst it is clear that there are such differences between the two, Kant is unequivocal that '[a]ll relation of thought in judgements are [...] of the predicate to the subject' (A73 / B98) and further that, in both analytic and synthetic judgements, the predicate and the subject are concepts (A7 / B11). Additionally, as will become apparent later in this section, there are very strong reasons for thinking that Kant's notions of both logic and of judgements are heavily influenced by the Leibnizian and Wolffian paradigm. However, for the sake of clarity, I shall here respect the difference in terminology by referring to propositions in the case of Leibniz and Wolff and judgements in the case of Kant.

mapping inferences, concepts have a fixed objective content which stand in certain relations to the content of other concepts. The validity of an inference is then construed as a function of these determinate relations. There are several important features to note about this picture. The first is that both the conceptual contents and the relations between conceptual contents are construed as determinate and objective, meaning that whether or not an inference from one judgement to another is valid is consequently an equally determinate and objective fact. The second is that this notion of conceptual content 'should be understood *intensionally* (in our modern sense)'.[15, 16] What is meant by this is that conceptual content is not construed by Leibniz or Wolff as a function of the object to which the concept applies, i.e., the conceptual content is not what, in modern contexts, analytic philosophers would be liable to call the *extension* of the concept, where this is understood broadly as the set of items which fall under it.[17] Rather, conceptual content is to be understood as something more like, what Anderson calls, 'a concept's *logical* extension' which is 'a sphere […] composed of further, more specific concepts'.[18] According to this reading, the "content" of the concept <*cat*> would consist of the further concepts <*feline*>, <*felid*>, <*quadruped*>, <*mammal*> and so on.[19]

The parallels between Kant's account of analytic judgements and the accounts of conceptual content extended by his rationalist forebears becomes apparent most readily when one examines what story Leibniz tells about the determinate relations which are supposed to hold between conceptual contents. Strikingly, he does so by mobilising the same kind of language which one finds in Kant's talk of conceptual containment. Perhaps most notably, Leibniz defines a true judgement as one in which the

[15] Ibid., p.50

[16] Anderson is not the first to have noted that both the conceptual content and containment relations in the Leibnizian sense specified by the rationalist model of term logics are what we would now call intensional. Most notably, Couturat (2013) [1903], C.I. Lewis (1918), Parkinson (1965, 1966), Adams (1994) have all made claims to this effect.

[17] The paradigmatic example of a theory of meaning which treats intensions (e.g. conceptual contents) as a function of extensions would be a theory of meaning built around a pictorial account of reference.

[18] Ibid., p.50 (my emphasis)

[19] As is standard in the literature, angle brackets '<>' will be used to delimit a concept.

agreement between the conceptual content of the predicate and subject terms consists in the inclusion [involvitur] or containment [continere] of the former *within* the latter:

> 'the predicate or consequent is always *in* the subject or antecedent, and the nature of truth in general or the connection between the terms of a statement, consists in this very thing […]. The connection and inclusion of the predicate *in* the subject is explicit in identities, but in all other propositions it is implicit and must be shown through the analysis of notions' – 'Primary Truths'[20]

Furthermore, in his 'Elements of a Calculus' Leibniz writes that

> 'This connexion is, that the predicate is said to be in the subject, or to be contained [contineri] in the subject; either absolutely and regarded in itself, or at any rate in some instance, i.e. that the subject is said to contain [continere] the predicate in a stated fashion. This is to say that the concept of the subject, either in itself or with some addition, involves the concept of the predicate, and therefore that subject and predicate are related to each other either as whole and part, or as whole and coincident whole, or as part to whole' – 'Elements of a Calculus'[21]

Here it is quite clear that, according to Leibniz, a concept will have a content iff it *contains* other concepts, such that the truth of a judgement relating that concept to the other is rendered a function of these relationships of containment. For example, consider any universal affirmative judgement which involves predicating a concept <*B*> of the subject concept <*A*>: this would be a judgement of the form [*A* is *B*].[22] If we were to suppose, à la Leibniz, that <*A*> has as a part of its conceptual content the concept <*B*>, the judgement will be rendered true by virtue of the partial intensional identity of those contents.

---

[20] Leibniz, G.W. (1989) [1675 - 1716] *Philosophical Essays*, p.31 (my emphasis)

[21] Leibniz, Gottfried Wilhelm (1966) [1679] 'Elements of a Calculus' in Parkinson (trans.) *Leibniz: Logical Papers*, p.19 (*C*51)

[22] The use of square brackets '[]' will used to indicate a judgement.

To borrow Leibniz's own mode of expression, one might say that the truth of [*A* is *B*] can be explained by the fact that <*A*> = <*BY*>.[23] In other words, the concept <*A*> is in fact just a conjunction of the concept <*B*> with the some further concept(s) (concepts which are here specified by the placeholder concept letter '*Y*'). Thus, to say of <*A*> that it is <*B*> is to say something which is necessarily true. For given that <*A*> when properly analysed is shown to be a conjunction of concepts one of which is <*B*>, it follows that <*A*>, at least in part, just *is the same concept as* <*B*>, i.e. is *identical* with <*B*>. Similarly, Leibniz avers that universal negative judgements can be explained in an analogous though inverse fashion. Specifically, he claims that in much the same way that a concept can contain another, it can also contain its negation. On this picture, a judgement like [*A* is not *B*] will be true iff <*A*> = <$\underline{B}Y$>, where an underscored letter represents a negated concept. Thus on this account in so far as <*A*> is partially identical with <$\underline{B}$> it follows of necessity that *A* is not *B*.

Importantly, much like in the case of the conceptual contents themselves, containment relations are here being construed intensionally, not extensionally, i.e. in terms of intensional as opposed to extensional mereological relations. Put another way, one might say that the whole-part relation at issue between <*A*> and <*B*> is not topological; <*B*> is not a discrete part of a larger spatial or temporal whole which is <*A*>. Rather, <*B*> is understood to be some intensional part of the wider intensional whole that is <*A*>, where intensional magnitude is understood in terms of conjunctive complexity of conceptual contents. This difference between intensional and extensional part-whole relations can be illustrated neatly with an example. Consider two concepts such as <*cat*> and <*feline*>. According to the intensional interpretation of conceptual containment relations, it is the concept <*cat*> which contains as a mere part the concept <*feline*>. However, if these concepts are instead taken to be proper names of sets and the associated talk of containment is to be understood as extensional and holding between these sets, it will be the set of all felines which contains as a mere part the set of all cats (cf. Fig. 1).

[23] Leibniz, Gottfried Wilhelm (1966) [1686] 'General Inquiries about the Analysis of Concepts and of Truths' in Parkinson (trans.) *Leibniz: Logical Papers* – (*C*366)

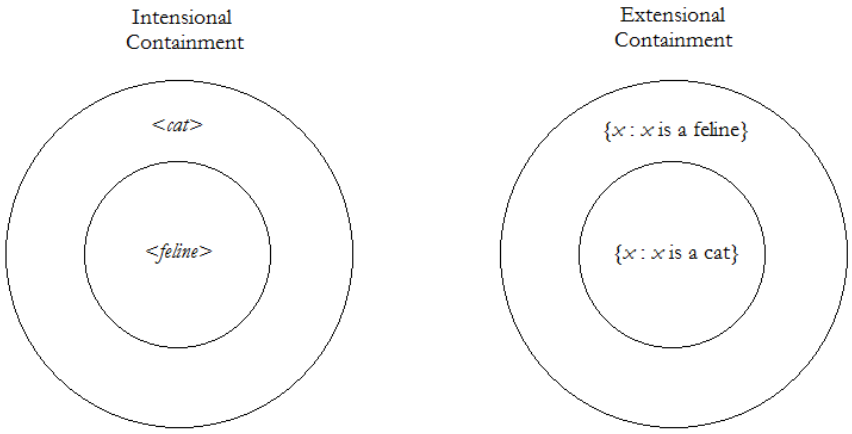

Fig. 1 – Intensional vs. Extensional Containment Relations

To summarise, Leibniz holds that the truth or falsity of any categorical judgement turns on whether there is a relationship of containment between its subject and its predicate concept. Thus a judgement will be true just in case either of the following holds:

(T1) the judgment is of the form [*A* is *B*] and <*A*> = <*BY*>

(T2) the judgment is of the form [A is not B] and <*A*> = <$\underline{B}$*Y*>.

Similarly, a judgement will be false just in case either of the following holds:

(F1) the judgment is of the form [*A* is *B*] and <*A*> = <$\underline{B}$*Y*>

(F2) the judgment is of the form [A is not B] and <*A*> = <*BY*>.

Of course, these conceptual conjunctions needn't be merely dyadic. The '*Y*' component can stand for a conjunction of concepts such that, for example, [*A* is *B*] will be true when <*A*> = <*BCDEF*> in just the same way as when <*A*> = <*BC*>. With this conception of true judgement to hand, Leibniz claims to be able to explain the ground of proper inference. Specifically, he claims that all syllogistic reasoning can be explained in terms of these relations of containment. For if <*A*> = <*BY*> and <*B*> = <*CZ*>, it follows that, when properly analysed, <*A*> = <*CZY*>. It thus follows from the fact that <*A*> = <*CZY*> that the

judgement [*A* is *C*] is true. It is for this reason that Leibniz writes in the *New Essays* that '[t]he inferences of logic […] are demonstrated by means of identities.'[24]

Crucially, what this shows is that for Leibniz this talk of concepts containing other concepts is not merely meant to account for the special modal and epistemic properties of select judgements. Rather, it is meant as a general definition of truth and falsity. For Leibniz, *all* truth and falsity is to be understood as a function of these relations. In this sense, Leibniz can be said to, as Parkinson (1965) puts it, construe both the truth or falsity of propositions and the inferences between them 'from the 'intensional' rather than from the 'extensional' point of view.'[25] This has significant consequences for the Leibniz's wider metaphysics which will be touched upon in section 2.4 below. For now, it will suffice to note that one such consequence of 'prefer[ing] to consider universal concepts or ideas and their composition' to 'instances subsumed under universal concepts' in this way is that the truth or falsity of any given proposition, much like the relations between concepts, 'do[es] not depend on the existence of individuals.'[26]

The Wolffian account of true judgement follows its Leibnizian forebear in various important respects. Most importantly, Wolff retains the Leibnizian commitment to the view that 'Truth is the determinability of the predicate by the notion of the subject',[27] i.e. that 'Whoever perceives how the predicate is determined by what is *contained* in the notion of the subject knows the truth of the judgment.'[28] Similar remarks can be found also in the *Deutsche Logic* where he remarks that 'the condition

[24] Leibniz, Gottfried Willhelm (1981) [1764] *New Essays of the Human Understanding* (trans. Remnant & Bennett), (4.ii.I) p.363

[25] Parkinson, G.H.R. (1965) *Logic and Reality in Leibniz's Metaphysics*, pp.10-11

[26] Leibniz, Gottfried Willhelm (1989) [1679] 'Elements of Calculus' from (trans. Loemker) *Philosophical Papers and Letters*, pp.237-8

[27] Wolff, Christian (1983) [1740] *Philosophia Rationales sive Logica*, (ed. École), pp. 392–3 (translation by Anderson (2015))

[28] Ibid., p.394 (translation by Anderson (2015)) (my emphasis)

[of a judgement's truth] only lies concealed in the subject'.[29] However, Wolff's position diverges from the Leibnizian model in certain important respects, most importantly in how he accommodates for negative judgements.

Wolff's reason for this divergence is presumably the fact that, when considered as part of his broader rationalist commitments, Leibniz's own explanation of negative judgements as outlined above is glaringly inadequate. For the idea that any judgement of the form [*A* is *B*] can be explained in terms of <*A*> being identical with <*BY*> appears to be incompatible with Leibniz's further claim that there is a set of primitive concepts, or 'first terms',[30] from which all others are composed. This supposition of an 'alphabet of human thoughts [de Alphabeto cogitationum Humanarum]'[31] is no mere idle fancy. In fact, it serves as the basis for Leibniz's epistemological doctrine that all truth is in principle, if not in actuality, knowable by means of reason alone. For on this model, it becomes an in principle possiblility for one to construct a map of all concepts and their formation out of the primitives which would then be able to provide a key to the truth status of any and all judgements. However, the problem with this notion of a 'Universal Calculus'[32] for his characterisation of negative judgements is simply that it, if indeed there is just some set of positive (i.e. non-negated) concepts from which all others are constructed, one cannot make sense of the notion of a concept containing as one of its conjuncts a negated concept. For example, if, say, all concepts are in fact constructions out of the concepts <*B*>, <*C*> and <*D*>, it is not possible to provide the truth conditions for the judgement [*A* is not *B*], for there is no way in which <*A*> when analysed could have the structure <*BY*>.

---

[29] Wolff, Christian (1770) [1712] *Logic, or Rational Thoughts on the Powers of the Human Understanding* (Deutsche Logic), p.68

[30] Leibniz, Gottfried Wilhelm (1966) [1666] 'Of the Art of Combination' from (ed. Parkinson) *Leibniz: Logical Papers*, p.4 (A vi. I, 195)

[31] Leibniz, Gottfried Wilhelm (1961) [1684] 'Plan de la Science Générale' from (ed. Couturat) *Opuscules et Fragments Inédits de Leibniz*, p.220 (standard translation)

[32] Leibniz, Gottfried Wilhelm (1965) [1679-86] 'Specimen of a Universal Calculus' from (ed. Parkinson) *Leibniz: Logical Papers*, pp.33-40

In order to motivate an alternative account of conceptual exclusion which can explain the truth of negative judgements without the supposition of problematically primitive negative concepts, Wolff proposes a slightly divergent model of the conceptual conjunction involved in containment relations. As has been outlined above, on the Leibnizian picture, the conjunction of concepts which characterises non-primitive concepts (i.e. those concepts which are capable of containing others) is essentially unrestricted. That is to say that any given concept can serve as a potential conjunct in another concept, meaning that any concept can be contained in multiple different and otherwise unconnected concepts. The concept <*cat*>, for example, can contain the concept <*feline*> and so can the concept <*puma*> without these two relationships setting any restrictions on the concept <*puma*> also containing, or being contained within, the concept <*cat*>. (Cf. Fig. 1.) Importantly, the epistemic consequence of this construal of containment is that knowing that the concept <*cat*> contains the concept <*feline*> tells one nothing about what other concepts the concept <*cat*> is precluded from containing or being contained within other than that it cannot be contained *within* the concept <*feline*>.[33] In this way, one might say of the Leibnizian model of conceptual conjunction that it is merely additive.

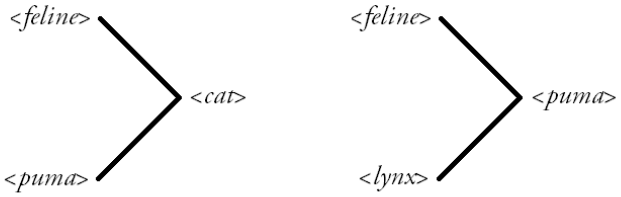

Fig. 2 –Leibnizian Additive Containment

By contrast, the Wolffian model is less liberal regards which concepts can possibly be contained in which others. For whilst Wolff does indeed follow Leibniz in thinking that the soundness of syllogistic inference concerning affirmative propositions is explicable in terms of relations of containment between

[33] For a more detailed treatment of this material, see Adams (1994).

concepts, and further in thinking that 'our general knowledge is entirely symbolical',[34] he diverges from the purely additive Leibnizian model of containment in one crucial respect. Specifically, he introduces the idea that 'in the sciences, all [inference] depends on […] *complete* notions as may be seen from the doctrine of judgement and syllogisms.'[35] Here "completeness" can be understood both logically and epistemically. Logically speaking, a complete concept is simply any concept understood as comprised out of those concepts which it contains. As such, every concept for Wolff can be said to be determinately complete in a logical sense *sub speicie aeternitatis*. Epistemically speaking, however, our grasp on concepts can be either complete or incomplete. One can know, for example, that *A* is *B* in so far as one knows that <*A*> contains <*B*>, but this does not mean that one knows the concept of <*A*> completely. For suppose that <*A*> = <*BCD*>. In this case, one's knowing merely that <*A*> contains <*B*>, whilst true, would not constitute knowledge of the complete concept, for one would not also know that <*A*> contains also <*C*> and <*D*>. To know <*A*> completely would thus be to know that it is identical with the complex conjunction concept <*BCD*>.

The significant consequence of this Wolffian qualification is that, on this reformed picture of conceptual containment, each concept as logically complete stands to every other in a determinate intensional relation, i.e. either as containing that other concept, as being contained by it or as standing in no containment relationship to it whatsoever. In other words, it means that on the Wolffian picture, all concepts belong to one interconnected conceptual *hierarchy* in which the relative position of one concept to another is intensionally determinate. This notion of completeness then becomes central to the pursuit of scientific knowledge in so far as it is only by means of insight into the complete contents of concepts that one can hope to determine the 'mutual connexion' between all different concepts characteristic of a perfected science.[36]

---

[34] Wolff, Christian (1770) [1712] *Logic, or Rational Thoughts on the Powers of the Human Understanding* (Deutsche Logic), p. lxxvi

[35] Ibid., p.lxxi (my emphasis)

[36] Ibid., p.lxxv

Wolff fleshes out this notion of a conceptual hierarchy further by characterising these relations of subordination and supraordination between concepts as those between genus and species concepts.[37] To this effect he writes that 'things are said to be of the same Genus or Species which have a [concept] in common' and further that they will be 'of the same Genus if the [concept] is common to different species […] and a [concept] common to several genuses constitutes a superior genus.'[38] Thus, on this model, if a given concept, <*A*>, contains another, <*B*>, <*B*> will be said to stand to <*A*> as a genus concept to a species concept. To use a more grounded example, Wolff would say that, in the case of the concept <*cat*>, in so far as it contains the higher concept <*feline*>, <*feline*> is a genus concept which is contained in the species concept <*cat*>. Furthermore, other species concepts can belong to the same genus concept, such that, for example, the concept <*lynx*> can also be said to contain the concept <*feline*> whilst, nonetheless, not being identical with the concept <*cat*>.

It is at this juncture that one is able to observe the way in which the Wolffian model of containment in terms of conceptual hierarchies is more conservative regards possible conceptual conjunction than the merely additive Leibnizian model. For in so far as any two species concepts which both contain the same genus concept are not identical, (i.e. in so far as there is some component which renders each a distinct species concept) they cannot possibly stand in relations of containment to one another. To continue the previous example, one could say in a Wolffian spirit that the concepts <*cat*> and <*lynx*> as distinct species concepts which both contain the genus concept <*feline*> are necessarily distinct from one another given that, if they weren't, there would not be multiple but just a single species concept. Furthermore, the only way in which these concepts can feasibly be said to differ from both the genus concept <*feline*> and from one another is if they (i) both contain some additional concept to the concept <*feline*> and further that (ii) that additional concept is not the same in either case. But this means that the

[37] This characterisation can also be found in Leibniz who writes that 'the individuals of the genus are related to the individuals of the species as whole to part). I consider the genus as a part of the species, since the concept of the species is produced from the concept of the genus and of the differentia' (*Leibniz: Logical Papers*, pp.29-30).

[38] Wolff, Christian (1770) [1712] *Logic, or Rational Thoughts on the Powers of the Human Understanding* (Deutsche Logic), p.31. Here I have replaced the translation of 'Begriff' as 'notion' with 'concept' where appropriate.

concepts <*cat*> and <*lynx*> both contain concepts which the other does not, meaning that neither one could wholly contain the other as part of its content. In this way, the Wolffian picture allows for determinate intensional relationships between concepts which do not stand in relations of containment to one another.

This negative intensional relation between two concepts can then be repurposed as a more logically robust account of conceptual exclusion: the concept <*cat*> *excludes* the concept <*lynx*> and vice versa in so far as neither could possibly contain one another. Furthermore, one would know without need of any further investigation that the further concept <*puma*> which contains the concept <*lynx*> could not contain, or be contained within, the concept <*cat*>. More technically, it would be open to the Wolffian to say that the concept <*puma*>, much like the concept <*lynx*>, *excludes* the concept <*cat*>. In this way, exclusion relations between concepts can be said to be knitted into the fabric of the network of conceptual containment relations. This greater perspicuity of the relationship between containment and exclusion relations is evidenced by the fact that according to the Wolffian model one is able to construct Porphyrian mappings of these concept hierarchies. For example, consider Fig. 3, which displays the mapping of the containment relations just discussed:

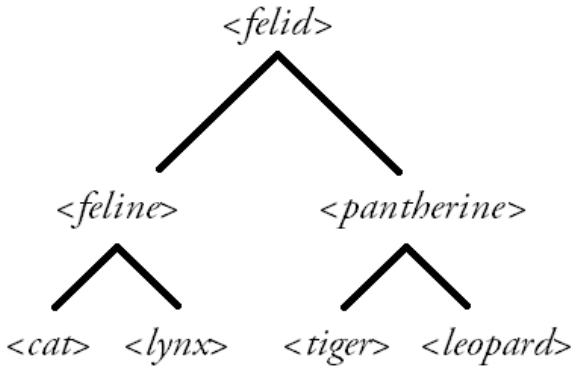

Fig. 3 – Porphyrian Concept Hierarchy

This diagram shows the way in which the Wolffian construes conceptual containment as a function of the dichotomous and exhaustive division of genus concepts into species concepts. This is in stark contrast to the Leibnizian approach which, in rendering containment relations independent from one another, is

denied the necessary means for mapping the intentional relations between concepts exhaustively. Consequently, the Leibnizian is unable to make room for the notion of conceptual exclusion which does not require primitive negated concepts in the way that the Wolffian is.

Bearing both these Leibnizian and Wolffian models of containment and exclusion in mind, we are now able to return to our original interpretative questions surrounding Kant's (A) characterisation of analytic judgements. Most importantly of all, we are now in a position to enquire as to whether Kant's talk of conceptual containment can be plausibly construed as of the same kind.

One reason for suspecting that the critical-era Kant might have inherited some sympathies with the broadly Leibnizian/Wolffian notion that the truth or falsity of propositions depends upon intensional, logical relations between concepts is the simple fact that there is strong textual evidence to suggest that the *pre*-critical Kant was committed wholeheartedly to such a view. A particularly fine example of this can be found in his 'New Elucidation'. Therein Kant writes that *all* truth can be demonstrated by 'appealing to the agreement of the concepts of the subject and the predicate', where such agreement consists in 'an identity between the concepts of the subject and the predicate' (Ak. 1:389)[39] Similarly, in his 'Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality' from 1764, written just five years before his decade long period of development on the critical philosophy began, Kant writes the following:

> 'The form of every affirmation consists in something being represented as a characteristic mark of a thing, that is to say, as identical with the characteristic mark of a thing. Thus, *every* affirmative judgment is true if the predicate is identical with the subject.' – 'Inquiry' (Ak. 2:294)[40]

Furthermore, in his various remarks on logic it is clear that Kant is heavily influenced by the Leibnizian / Wolffian paradigm dominant in German philosophy at that time. For one thing, Kant

[39] Kant, Immanuel (1992) [1755] 'A New Elucidation of the First Principles of Metaphysical Cognition' in *Theoretical Philosophy 1755-1770*, p.7

[40] Kant, Immanuel (1992) [1764] 'Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality' in *Theoretical Philosophy 1755-1770*, p.268

explicitly states multiple times that the most significant figures in the development of logic amongst his contemporaries were Leibniz and Wolff. For example, in the *Blomberg Logic* (compiled circa 1770) he remarks that 'Leibniz, and Wolffius, […] were in recent times the ones who improved philosophy, and were its true fathers'. Moreover, he also reports in the introduction to the *Jäsche Logic* that 'Among modern philosophers there are two who have set universal logic in motion: Leibniz and Wolff.' (Ak. 9:21).

More importantly, however, there is also ample textual evidence to suggest that the critical-era Kant's notion of containment and exclusion is explicitly Wolffian. Perhaps the most striking passages in support of this reading can be found in §§9-15 of the *Jäsche Logic* (compiled circa 1790) in which the relationship between concepts is discussed. There it is asserted that some concepts 'are called *higher*, others '*lower'*, and further that 'the higher concept, in respect to its lower one, is called genus, the lower concept in regard to its higher one *species*' (Ak. 9:96). The connection of this talk of higher and lower concepts with the notion of containment is then made explicit in §13: 'The lower concept is not contained *in* the higher, for it contains *more* in itself than does the higher one; it is contained *under* it' (Ak. 9:98). Furthermore, he then goes on to say in section 14 that 'What belongs to or contradicts higher concepts also belongs to or contradicts all lower concepts that are contained under those higher ones' (Ak. 9:98). In other words, the *Jäsche Logic* leaves little doubt that the critical-era Kant's model of containment relations is one according to which concepts are hierarchically ordered.

On the basis of the foregoing considerations, I would urge that it is not only interpretatively advantageous but also historically plausible to read Kant's notion of containment as following the Leibnizian / Wolffian logical paradigm and further that appreciating this fact can help to make sense of how Kant understands analytic judgements. Crucially, understanding Kantian analytic judgements in this way would seem to provide a model of containment which would allow Kant to respond to both the deficiency and subjectivity objections presented in section 1.1. Against the objection that the talk of containment in the *CPR* is merely metaphorical it can be responded that both containment and exclusion

are strict *logical* notions[41] which track intensional agreement and disagreement between concepts. Likewise, against the objection that the notion of containment is too psychological and subjective, it can be responded that relations of containment and exclusion are not idiosyncratic but determinate objective relational features of concepts. For these reasons, it would seem to be a promising candidate for the account of analytic truth in the *CPR* which we were hoping to identify. This would then serve as the basis for a new unified reading of Kant's quadripartite characterisation of analytic judgements according to which the analyticity of an analytic judgement, i.e. its necessity and a prioricity, are explained in terms of intensional relations between concepts.

However, to this new unified reading a further objection has been raised that warrants serious consideration. What is of particular note about this challenge is that it has been put forward in the name of advancing an alternative unified reading, albeit a unified reading built around characterizations (B) and (D), i.e., the identity and contradiction characterizations. Let us now turn to considering this objection and the arguments in favour of adopting the alternative view.

1.3 – STRICT IDENTITY, CONTRADICTION AND NEGATION

The first thing to note about Proops's (2005) alternative unified reading is that it is broadly sympathetic to reading Kant's notion of conceptual containment on the model of its Leibnizian and Wolffian antecedents. In favouring Kant's characterisation of analyticity in terms of identity, Proops does not take himself to be rejecting the characterisation in terms of containment as unregenerately confused. Rather, he sees the identity characterisation as 'merely a deeper analysis of the containment-or-exclusion criterion […] a refinement or modification'.[42] Furthermore, Proops leans on a Wolffian construal of Kant's notion of containment in order to formulate a response to one of the deficiency objections outlined in §1.1, i.e., the objection that the notion of a part of a concept is problematically metaphorical.

[41] In the strictly rationalist sense of logical as concerning syllogistic inferences licensed by objective, intensional relations between concepts.

[42] Proops (2005), p.598

He argues therein that the notion of a conceptual part can be made perspicuous with the help of the 'ideas from the traditional logic'.[43]

Nevertheless, Proops's sympathies only extend so far. Ultimately, he remains dissatisfied with Kant's containment characterization. This dissatisfaction stems from a belief that ultimately a particularly virulent form of deficiency objection is effective against the unified readings built on the containment characterisation and that only the more technical and logical notions of conceptual identity and contradiction can provide Kant with the tools necessary for 'grounding analytic truths' which are capable of responding to it.[44]

The deficiency objection in question asserts that analyticity as defined in terms of conceptual containment and exclusion is incapable of accounting for the necessary truth and falsity of 'explicit […] identities/contradictions'.[45] Specifically, Proops holds that neither containment nor exclusion is sufficient to provide Kant with a way of cashing out the full-blooded intensional notions of identity and negation given that containment and exclusion are both limited to capturing the intensional relations which hold between *different* concepts. In contrast, identity is a reflexive relation which holds between a concept and itself whilst negation is a monadic operator which qualifies a single concept. Proops thus urges that whilst a unified reading based on the containment characterisation might be able to explain how Kant is able to account for the necessary truth of judgements like 'All cats are felines' or 'No cats are felids', it cannot account for the a priori knowability and necessity of judgements like 'All cats are cats' or 'No cats are cats'.

Proops is confident that Kant can be defended against such an objection without recourse to abandoning the pursuit of a workable unified reading and adopting a heavily qualified interpretation in the fashion of Allison (2003) and Van Cleve (2003). However, he suggests that such a defence can only be mobilised if one takes the identity and contradiction characterisations in tandem rather than containment

[43] Ibid., p.598

[44] Ibid., p.605

[45] Ibid., p.608

as principal. On this model, the identity of any given set of concepts is still understood in terms of the identity of their intensions, however, there is no longer any specification that this identity should always be understood primarily in terms of containment and concept hierarchies.[46] According to Proops, the upshot of this adjustment is that we are then able to explain Kant's assertion at B17 that 'some few fundamental propositions […] are, indeed, really analytic […]; for instance, a=a'.

The flipside of Proops's unified reading is his construal of contradiction which, unlike in the unified reading based on containment, is not understood in terms of exclusion but instead negatively in terms of the incompatibility of any two concepts to come together to form a true judgement. This notion of conceptual incompatibility is then taken to be primitive. According to this picture, whilst analytic truth is understood as a function of the identity, or partial identity, of the intensions of the concepts included in a given judgement, analytic falsehoods (i.e. judgements which are false of necessity) and the truth of negative analytic judgements are to be understood as a function of the primitive intensional incompatibility of their constituent concepts, where this cannot be explicated in any further logical or technical detail. The supposed advantage that this account of contradiction has over that presented in §2.2 which parses it in terms of conceptual exclusion is that it is supposed to be able to account for explicit contradictions like 'No cats are cats'. It is for these reasons, Proops suggests that 'the identity-and-contradiction characterisation must be recognized as the most central and fundamental conception of analyticity in the first Critique.'[47]

The first thing to note is that Proops's objection that containment cannot account for explicit identities seems to miss its target. On the unified containment reading which I favour, containment is understood as a species of intensional identity and it is this identity that is said to explain the necessity that attaches to true analytic judgements. Intensional identity is thus construed as primitive and centrally important in much the same way that it is on Proops's reading. However, according to the containment

[46] On this reading, talk of containment is useful only insofar as it is supposed to allow for Kant to make sense of talk of partial identities and parts of concepts.

[47] Ibid., p.609

reading, analyticity cannot be understood in terms of this identity alone. As we saw in §2.2, intensional identity alone is not enough to explain negative analytic judgements and their relations to affirmative analytic judgements. This must be supplemented with a model of the interconnected relations of intensional identity. Containment and the reciprocal notion of exclusion are seen to be able to fulfil this additional function. Thus, the advocate of the containment-exclusion reading of analyticity in the *CPR* can account for explicit identities in much the same way that Proops does (i.e. in terms of the complete intensional identity between the two terms of the judgement) without thereby promoting the notion of intensional identity to a position of greater explanatory significance than either that of containment or exclusion.

However, Proops's objection that conceptual exclusion seems insufficient to render explicit contradictions as analytic falsehoods would seem to pose a more serious threat. If one considers again the model of mapping containment relations in terms of Porphyian trees, one will note that such trees do not include branches leading to or from negated concepts,[48] and without negated concepts, it would seem that no explicit contradiction could be rendered analytic by means of an exclusion relation. Consider again Fig. 3. If one were reliant upon exclusion relations between concepts alone to determine whether a given judgement is analytic, the judgement 'Tigers are not tigers' would not seem to come out as analytically false on this model. Rather, it would seem that instead an exclusion relation like that mapped by Fig.4 would need to hold.

[48] It is true that the philosophical precedent has indeed been set for division trees featuring negation (Cf. Plato's *Statesman* and *Sophist*). However, the Porphyrian model being considered here is explicitly framed in terms of genus-species relations which cannot include negation, e.g., there is no species or genus of *non*-humans.

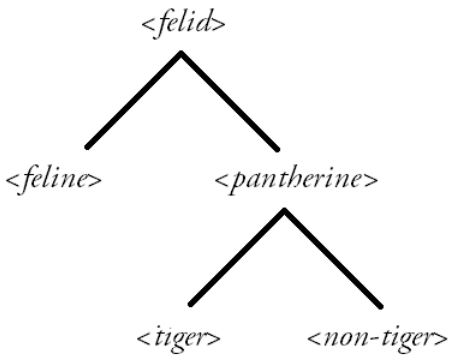

Fig. 4 – Aberrative Porphyrian Hierarchy

But given that Fig. 4 represents a malformed Porphyrian tree, this seems beyond the pale. As such, the notion of conceptual exclusion would seem to be hopelessly limited to explaining only the necessary falsity of judgements which feature no explicit negation such as 'All tigers are felines'.

However, this objection, whilst seeming to cut deep, is really only superficial. In fact, I would urge that it rests on Proops's failure to acknowledge a difference for Kant between judgements and the sentences which we use to express them. The importance of this distinction to Kant's account of analyticity is first acknowledged in Bennett (1966). There Bennett points out that any given sentence can be used to express different judgements such that it can be taken 'either as analytic or as synthetic, depending on which of two equally standard [concepts] is attached to [each] of its terms.'[49] In contrast, a Kantian judgement, is said have fixed concepts for its terms and could be said to be that which a sentence can be used to express. For example, the sentence 'All cats are felines' could be used to express both (1) the analytically true judgement that [All cats are felines] in which the word 'cat' stands for the concept <*cat*>, or (2) the analytically false judgement [All felids are felines] in which the word 'cat' stands for the concept <*felid*>. On the picture that I have been defending, the a priori knowability of the truth of the judgement (1) is a function of the containment relations which hold between the concepts <*cat*> and <*feline*>, whilst the a priori knowability of the falsity of judgement (2) is a function of the exclusion relations between the concepts <*feline*> and <*felid*>.

[49] Bennett, Jonathan (1996) *Kant's Analytic*, p.5

What this difference between sentences and judgements highlights is the fact that the superficial grammar of a sentence can conceal the underlying structure of the judgement it is designed to express. One might intend for the sentence 'All cats are felines' to express judgement (1) whilst an utterance of this sentence could be taken by a third party to express judgement (2). The upshot of this distinction is that a unified reading of Kant's account of analytic *judgement* needs only to provide an account of what he holds renders *judgements* true or false of necessity. If seemingly problematic judgements like those involving explicit contradiction arise, we must be careful to ensure that we are not being misled by the grammar of the sentence in which it is expressed if we are to dismiss one of Kant's characterisations of analyticity off the back of it.

It seems as though Proops's objection is borne of a failure to pay sufficient attention to precisely this possibility. Specifically, it seems to follow from his taking the terms of a judgement involving explicit contradiction to be a concept and another concept which serves as its negation, e.g., <*cat*> and <¬*cat*>. But it is this supposition that engenders the requirement that the containment-exclusion account would have to allow for the possibility of concepts featuring negations appearing in concept hierarchies in order for it to be able to explain the necessary falsity of such judgements. What is more, one needn't interpret the judgement expressed by a sentence involving explicit contradiction in this way. Such sentences could be equally well understood as expressing judgements in which the same concept appears twice, once as subject and once as predicate, and in which intensional identity of the two is denied, i.e. a judgement like {Cats are not cats]. On this analysis of such sentences, they would express judgements which could perfectly well be explained in a manner that is commensurable with the containment-exclusion characterisation.

1.4 – THE COMMENSURABILITY OF KANT'S FOUR CHARACTERISATIONS OF ANALYTICITY

Now that we have seen that there are strong reasons for thinking that the containment-exclusion characterisation can survive the various objections that have been levelled at it, we are free to enquire as to whether a unified reading of Kant's remarks on analyticity built around it can commensurate the four

characterisations presented in section 1.1 and provide the account of Kantian analyticity that we set out to discover. It is my contention that it can and, furthermore, that it can do so precisely because (i) characterisations (A) and (B) amount to a singular characterisation which accounts for the special modal and epistemic properties of analytic judgements, and (ii) because characterisations (C) and (D), aside from serving as criteria for identification of a given judgement as analytic, also serve as setting out features which analytic judgements possess in virtue of the intensional characteristics attributed to them by characterisations (A) and (B). Given that in sections 1.2-3 it was shown how the containment-exclusion reading commensurates characterisations (A) and (B), all remains is for us to briefly consider how these can be read as compatible with characterisations (C) and (D).

Characterisation (C) distinguishes analytic from synthetic judgements on the basis of their epistemic contribution to the belief set of the judging subject. In section 1.1 it was suggested that this characterisation could be used as a means of identifying a given judgement as either analytic or synthetic. However, it also appears this difference between analytic and synthetic judgements might be explicable in terms of the different ways in which one can come to know such judgements to be true. On the containment-exclusion reading of analyticity, an analytic judgement can be known to hold of necessity a priori in virtue of the subject concept sharing in a complete or partial identity of intension with the predicate concept. Thus, when the judging subject acknowledges the truth of an analytic judgement, they are not acquiring any information about the objects to which those concepts attach. Rather, they are merely observing that relation of intensional identity which implicitly holds. As such the epistemic consequence of a subject's entertaining an analytic judgement is mere explication, not amplification.[50]

[50] Another reason that the Proops style unified reading based around characterisations (B) and (D) seems less plausible than one built around characterisation (A) is that it is hard to see why Kant would specify that it is a necessary condition of an analytic judgement that it be epistemically explicative. For if indeed explicit identities and contradictions are to be classified as analytic, they would clearly constitute a sub-class of analytic judgements which did not meet this requirement. Kant acknowledges this fact in the *Vienna Logic* where he distinguishes 'tautological proposition[s]' in which 'the identity is *explicita*' from those in which 'the concept is the same *implicite*'. The former, he writes, are 'empty' whilst the latter are not 'for through them a mark that lay hidden is made clear' (Ak. 24:937).

Commensurating characterisation (D) with the account of analyticity in terms of containment is even more straightforward. As has been made clear in the previous sections, the containment-exclusion reading purports to provide an account of what for Kant provides analytic judgements with their special epistemic status. If it achieves this goal, it will be able to explain why it is that the denial of a true analytic truth is necessarily an analytic falsehood, and in turn explain why it is that A is analytic iff its opposite, ¬A, is a contradiction.

In summary, I conclude that we have good reason for favouring a unified over a qualified reading of Kant's quadripartite characterisation of analyticity and that, furthermore, we should favour a unified reading which takes the containment-exclusion characterisation as opposed to the identity-contradiction characterisation as explanatorily primary. I have argued that this kind of reading is preferable on the grounds that it is able to make maximal sense of the text and is best suited to explain why analytic judgements have the other features picked out by the remaining characterisations. Thus, I conclude further that we have good reason to think that Kantian analyticity is explicable in terms of *intensional* relations between concepts. In the following chapter, I will explore the ramifications of attributing this position to Kant and whether it causes problems for his account of uniquely synthetic truth.

In other words, only non-tautological judgements can be explicative and thus would appear to be the only truly analytic judgements.

2 – KANTIAN ANALYTIC JUDGEMENTS IN CONTEXT

2.1 – CONCERNS ABOUT COMMENSURABILITY

In the previous chapter it was argued that it is possible for one to make sense of Kant's talk of conceptual containment and identity on the model of similar locutions deployed in rationalist term logics. In particular, it was urged that the Leibnizian calculus of conceptual relations with Wolffian qualifications could be taken as a model for the kind of purely intensional inter-conceptual relations which for Kant determines the discursive role of concepts. Furthermore, it was maintained that in explaining containment and identity relations between concepts as logical in this way, it is possible to explain how Kant could effectively respond to both deficiency and subjectivity objections to his characterisations of analytic judgements (A) and (B). Furthermore, it was suggested that it is these characterisations and these characterisations alone which, in aiming to provide an explanation of the special modal and epistemic properties of analytic judgements, are able to serve as the centrepiece of a unified reading of Kant's otherwise seemingly disconnected remarks on analytic judgements. Finally, it was demonstrated at the conclusion of the previous chapter that this "logical" reading of characterisations (A) and (B) can indeed provide the basis of such a unified reading by explaining why any categorical subject-predicate form judgement in which the concept of the subject term contains or is identical with the concept of the predicate term would have both special epistemic properties and why its contrary necessarily counts as a contradiction.

In short, what the interpretation of characterisations (A) and (B) would seem to provide is a reading of Kant's remarks on analytic judgements which does maximal justice to the text but which is all-the-same properly grounded within the intellectual context from which both Kant's account of theoretical judgement and his wider critical philosophy were born. For all these reasons, I take it that this interpretation is prima facie appealing. However, at this point in proceedings it is important that we take note of the fact that thus far our focus has been on making sense of Kant's analytic judgements on their own terms, largely in abstraction from the rest of Kant's critical philosophy. This approach has had its advantages; namely, we have been able to give more attention to an aspect of the text which is often

glossed, and have consequently identified a way of interpreting these passages which renders them more coherent than many of other treatments. However, it also has potential disadvantages, the most obvious of which being that, in focusing in so closely on a relatively small part of Kant's critical system, we may have blinded ourselves to the wider contours of his critical project and proposed accounts of both analytic judgements and relations between concepts which are incompatible with parts of the wider pool of primary textual evidence.

In particular, one might be concerned that in attributing to Kant a broadly Leibnizian/Wolffian conception of intensional logical relations between concepts, one would necessarily be committing him to a position which runs contrary to one of the central tenets of the *CPR*; namely, the notion that there are distinctively *synthetic* as well as analytic judgements. More specifically, one might worry that in assuming that Kant adopts both (i) a rationalist conception of concepts according to which they all stand in determinate relations of containment and exclusion to one another, and (ii) a rationalist conception of logic according to which the truth of a proposition is knowable by means of an analysis of these relations, one necessarily commits Kant to the rationalist view that the truth of *all* categorical judgements is in principle knowable by means of conceptual analysis, i.e. the view, as analytic philosophers might say, that all truth is ultimately analytic. For if indeed all categorical judgements are conjunctions of a subject concept and a predicate concept[51] and all concepts are connected to one another in an interconnected web of containment and exclusion relations, then it would seem that the truth of any and all such judgements is in principle determinable by means of conceptual analysis alone. But this would leave no room for the possibility of judgements the truth or falsity of which is *not* determinable in that way; judgements the truth or falsity of which can only be known in accordance with the contribution of intuitions, i.e. distinctively synthetic judgements.

A second related worry that one might have about compatibility concerns the consequences of the interpretation of analytic judgements outlined above for Kant's conception of the quantity of judgements. According to both Leibnizian and Wolffian orthodoxy, the quantity of a proposition, whether it be

[51] Kant is clear that 'all relation of thought in judgements is [...] of the predicate to the subject' (A73 / B98).

universal, particular or singular, is also a function of the intensional characteristics of its component concepts, i.e. it is a function of facts about what containment and exclusion relations the subject concept stands in to the predicate concept. However, in contrast to this position, Kant seems to suggest in the *CPR* that the quantity of a synthetic judgements is to be understood in terms of the fact that intuitions – in contradistinction to concepts – are representations which are 'single [einzeln]' (A230 / B377), where singularity is here understood in terms of extensively discrete spatio-temporal '*magnitudes*' (A162 / B203).[52] A consequence of this commitment would seem to be that for Kant a singular synthetic judgement, i.e. what Kant calls a 'judgement of experience' (A7 / B11), is simply any judgement which is about an individual spatiotemporal object given in experience, meaning that the singularity of Kantian judgements of experience can be said to be *extensional*, rather than intensional. Similarly, universal and particular synthetic judgements are said to derive their quantity from the fact that they are 'regarding certain objects' (Ak. 9:102). Thus, the problem for the interpretation of analytic judgements outlined above is that, if Kant were indeed committed to a broadly Leibnizian/Wolffian conception of logic as I have suggested, it is not clear how he could avoid being encumbered with two conflicting accounts of the quantity of judgements: one general logical account which renders the judgement's quantity as dependent on intensional relations between concepts, and another transcendental logical account which renders it a consequence of the fact that the judgement in question involves some connection with sensible intuition and is thus immediately related to some spatiotemporal magnitude or magnitudes. As will become apparent, this problem is especially acute with regards to singular judgements. In other words, the risk is that in asserting that Kant is committed to a Leibnizian/Wolffian conception of logical relations between concepts, one might end up ascribing to him mutually incompatible *intensional* and *extensional* conceptions of quantity. On this basis the sceptic might complain that greater interpretative parsimony would be achieved if one were to assume that Kant's notion of conceptual containment is in fact quite

[52] This characterisation is also repeated in the *Jäsche Logic* where he defines an intuition a '*singular* representation (*representation singularis*)' and, in contrast, a concept as a 'universal (*repraesentatio per notas communes*) or *reflected* representation {*repraesentatio discursiva*' (Ak. 9:91) (emphases in original).

unlike the Leibnizian / Wolffian models and, consequently, that he does without any equivalent notion of intensionally determined quantities of judgements.

In order to effectively defend the interpretation of Kantian analytic judgements presented in Chapter 1, then, it will be necessary to explain how Kant is able to retain an account of analytic judgements built on a commitment to Leibnizian/Wolffian conception of logical relations between concepts, one which has substantive consequences for his account of theoretical judgement in general, and yet at the same time (i) avoid committing himself to the Leibnizian/Wolffian view that all truth is in principle determinable by means of conceptual analysis and (ii) allow for the possibility of both an intensional and extensional account of the quantity of judgements. Marshalling just such a defence of the above interpretation will be the primary objective of this chapter.

I will argue as follows. First, I will urge that Kant is able to deny that every truth-apposite combination of concepts depends on intensional logical relations by rejecting the Wolffian supposition that the interconnected system of conceptual containment and exclusion relations forms an interconnected whole. This, I will suggest, then allows for the possibility of 'coordinate' combinations of concepts in synthesis (*Jäsche Logic,* Ak. 9:59) which do not already stand to one another in pre-determined intensional relations of 'subordination' (*Jäsche Logic,* Ak. 9:97).

Secondly, I will argue that Kant in fact does allow for the quantity of universal and particular propositions to be determinable both intensionally in the case of analytic judgements and extensionally in the case of synthetic judgements and that this is not as problematic as it may at first seem. However, I also argue that he rejects wholesale the Leibnizian/Wolffian, general logical account of singularity and replaces it with a new, transcendental logical account in terms of intuitions. In other words, Kant does not allow for the possibility of intensionally singular judgements; all singular judgements are for him necessarily synthetic.

Finally, I will suggest in §2.4 that reading Kant's account of the logical differences between analytic and synthetic judgements in this way can help explain an important argumentative and rhetorical

function of the analytic / synthetic distinction in the *CPR*. Specifically, it is used to demonstrate the inadequacy of the Leibnizian / Wolffian account of existential propositions.

2.2 – MAKING ROOM FOR SYNTHETIC JUDGEMENTS

In contrast to their analytic counterparts, Kant defines synthetic judgements as those in which one 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' (A8). This mysterious 'X', Kant goes on to say is to be understood as 'an experience […] [i.e.] a synthetic combination of intuitions' (A8 / B12). It is for this reason that Kant then asserts that in judging synthetically one will 'advance beyond the given concept, viewing it as in relation with the concept something altogether different from what was thought in it' (A154 / B193-4). Importantly, it would seem as though Kant is here suggesting not just that synthetic judgements are known to be true by some other means than thinking the predicate concept in the subject concept, but that their truth cannot be known by means of examining what the subject concept contains. Namely, it would appear to consist in two concepts which do not stand in a relation of containment to one another being brought together in experience such that the predication of the one of the other is nonetheless valid.

As an example, suppose that <*H*> and <*G*> are entirely independent concepts such that neither <*H*> contains <*G*> nor <*G*> contains <*H*>, and further that <*H*> ≠ <*G*>. On this picture, the judgement [*H* is *G*] can still be true according to Kant just in case one has an experience such that <*H*> and <*G*> are brought together in intuition. A more substantial example can be provided if one considers the relations between the more substantial concepts <*cat*> and <*sleep*>. The concept <*sleep*> is not contained in the concept <*cat*> and thus the judgement [this cat is sleeping] is not analytic. Nonetheless, one could have an experience in which 'the synthesis of the two concepts can be achieved' (A155 / B194); namely, one could determine by means of experience that this cat is sleeping.

Now, the obvious problem that one has in attempting to commensurate the possibility of synthetic judgements understood in this way with the account of analytic judgements in terms of

Wolffian-style containment and exclusion relations, is that the latter would seem to prescribe that all relations between concepts are intensional, determinate and fixed. To see why this follows consider the Wolffian map of conceptual relations presented in Fig.5.

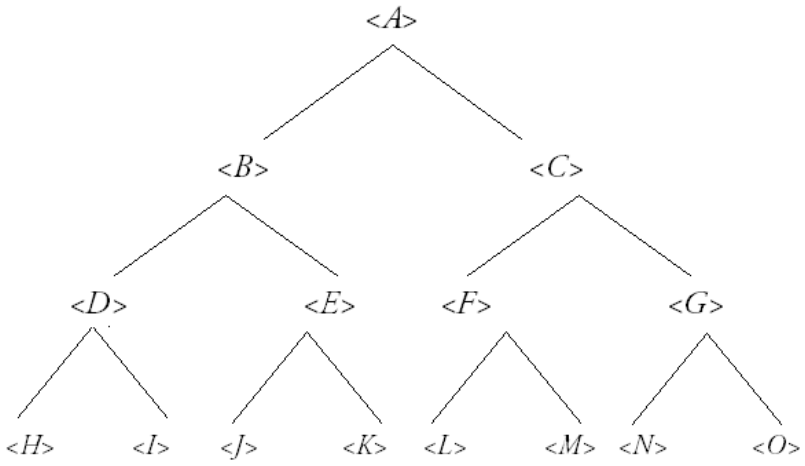

Fig. 5 –Wolffian Containment/Exclusion Nexus

According to this account, any given concept within the nexus stands to any other concept either in a relation of containment, identity or exclusion. For example, the concept <*H*> was seen to contain the concepts <*A*>, <*B*> and <*D*> and to exclude all others such that a judgement like [*H* is *D*] is necessarily true, all whilst a judgement like [*H* is *G*] is necessarily false.

The problem that would seem to emerge for making this model compatible with the possibility of distinctively synthetic judgements is simply that this account of containment and exclusion would appear to render the truth or falsity of any and all posited relations between concepts something which follows of necessity from the completeness of the nexus of containment and exclusion relations between concepts. In other words, the Wolffian model of containment and exclusion would seem to make it impossible for there to be any judgement which 'taken in and by itself' (i.e. in terms of the containment and exclusion relations between its constituent concepts) is such that 'the truth or falsity of it can never be discovered [by analysis]' (A154-5 / B194). Thus, to continue the example listed above, it would seem that if indeed the Wolffian model of containment and exclusion were the basis of Kant's account of analytic judgements, Kant would be committed to a model of the role of concepts in judgements which would

render all judgements, even those like [this cat is sleeping], such that their truth could in principle be determined merely by analysing the concepts involved. For the concepts <*cat*> and <*sleep*> would both, on this picture, feature in a closed system of concepts such that <*cat*> is either identical with, contains, is contained by, or excludes the concept <*sleep*>. It would therefore not be possible for any two concepts like these to be independent of one another in the way that a distinctively synthetic judgement requires them to be. As Anderson (2015) puts the matter, on the Wolffian picture 'every relation of concepts is one of complete containment, or complete exclusion'. In other words, it would seem that in explaining Kant's talk of containment in terms of the Wolffian model, one would end up committing him to a view of concepts and their role in judgements which would not allow for the possibility of distinctively synthetic judgements.

Another way of putting this worry is by saying that, in reading Kantian analytic judgements as depending on Wolffian-style containment or exclusion relations between concepts, one seemingly precludes the possibility that there could be judgements in which the constituent concepts are '*coordinate*' with, as opposed to '*subordinate*' to (Ak. 9:59), one another. In the *Jäsche Logic*, Kant clearly distinguishes between these two different kinds of relations in which concepts can stand to one another in a judgement. One concept, <*B*>, is said to be '*subordinate*' to the another, <*A*>, just in case <*A*> is 'represented in the thing only by means of [<*B*>].' (Ak. 9:59) Clearly what Kant has in mind here is the sort of relationship between concepts which stand in a relation of containment to one another. The concept <*cat*> is subordinate to the concept <*feline*> in so far as the former contains (i.e. is partially identical with) the latter.[53] Consequently, one can say that the concept <*feline*> is represented in the judgement [Cats are

[53] This interpretation is supported by Kant's further remarks in §§8-10 of the *Jäsche Logic*. First, in §8, he introduces the idea that a concept can be thought of as having logical 'extension' or '*sphere*', where this is said to comprise 'all those [concepts] under itself from which it has been abstracted' (Ak. 9:96). All these concepts, he elaborates, in so far as they are 'contained under it', can be said to be 'represented under it' (Ak. 9:96). Then in §9 he writes of the container concepts that they are '*higher* (*conceptus superiores*)' than those '*lower* concepts' which they contain. Finally, in §10 he specifically stipulates that these higher and lower concepts, i.e. '*genus* and *species* concepts', are 'in regard to their relation to one another […] in logical *subordination*' (my emphasis) and that they together form a '*series* of several concepts subordinated to one another' (my emphasis) (Ak. 9:97).

mammals] only by means of the concept instantiation therein of the concept <*cat*>.[54] In contrast, Kant also stipulates that there is a second way in which concepts can be related to one another in a judgement. Specifically, he writes that they can be 'coordinate' with one another. In this case, the concepts do not stand to one another as members of a '*series*' (or, as nodes on a branch of a division tree) but instead constitute 'an *aggregate*' (Ak. 9:59), i.e. an intensionally unconnected bundle of marks.

The problem that faces the interpretation of analytic judgements that I have been defending, then, is how Kant can possibly allow for truth-apposite coordinate relations between concepts if in fact all concepts stand to one another in a determinate web of containment and exclusion relations to one another. For if all concepts do feature in such a web, this would only allow for the possibility of two kinds of judgements; namely, (i) those which are *true* and in which the subject concept is subordinate to the predicate concept and (ii) those which are *false* and in which the predicate concept is excluded from the subject concept. For suppose that the totality of concepts ran from <*A*> to <*O*>. On the Wolffian picture according to which all concepts are connected as part of one determinate and interconnected web one could map the complete web of concepts as in Fig.5.

No two concepts, on this model, can be combined in judgement in a way that is not intensionally determinate. Take, for example, two concepts which appear at the most distance from one another in this web, i.e. the concepts <*H*> and <*O*>. Even these cannot be coordinate in Kant's sense for in so far as <*H*> contains <*B*>, it necessarily excludes <*C*>, a concept which is contained within <*O*>. Consequently, the judgement [*H* is *O*] is necessarily false, for in saying that [*H* is *O*], one is saying by proxy that [*H* is *C*] and by extension that [*H* is not *B*]. But given that <*H*> contains <*B*>, it follows that [*H* is *O*] is in violation of the principle of contradiction and thus necessarily false.

[54] Further support for this reading of Kant's talk of 'subordinate' concepts can be found in the *Blomberg Logic*. In the pre-critical remarks on logic Kant espouses therein, he is explicit in characterizing a relation of conceptual subordination as that in which 'I make for myself various genera [concepts] and I subordinate the species [concept]'. Furthermore, he calls this bringing of concepts into taxonomical hierarchical relations with one another 'Logical subordination' (Ak. 24:260).

However, whilst this worry might seem to threaten a serious challenge to the interpretation of Kantian analytic judgements outlined above, I think it can be dismantled without too great a fuss. For whilst it is true that this objection would be devastating if Kant's commitment to the Wolffian model of exclusion was entirely contingent upon his accepting that *all* concepts stand to one another in a singular web of such relations, it is simply not at all clear that he can't allow for such exclusion relations without accepting that all concepts stand to one another in determinate intensional relations.

Crucially, as we saw above, Wolff needs for there to be just one closed, intensional system of concepts for the simple reason that it is this which provides the foundation for a complete science determinable in principle on the basis of reason alone. Put simply, on the Wolffian model, the completeness and closure of such an intensional system of concepts is what provides the basis for such a science. If all concepts stand in relations of containment, exclusion or identity to all others, it would seem to be possible to determine the appropriate, truth-apposite combinations of concepts by means of the composition of a complete map of all concepts, a map which could then serve as the key to all true propositions.

However, it is far from clear that Kant needs to accept that there is just one such a closed intensional system of concepts in order to help himself to a Wolffian-style account of exclusion relations between concepts. Instead, he could allow for there to be multiple, entirely independent, closed intensional systems of connected concepts. On this account, the containment and exclusion relations between concepts on which Kantian analytic judgements depend would hold only between the concepts belonging to a particular tree. Such an account of containment and exclusion could thus be mapped rather less on the model of the Wolffian diagram from Fig.5 and rather more in line with the alternative construction listed under Fig.6 below.

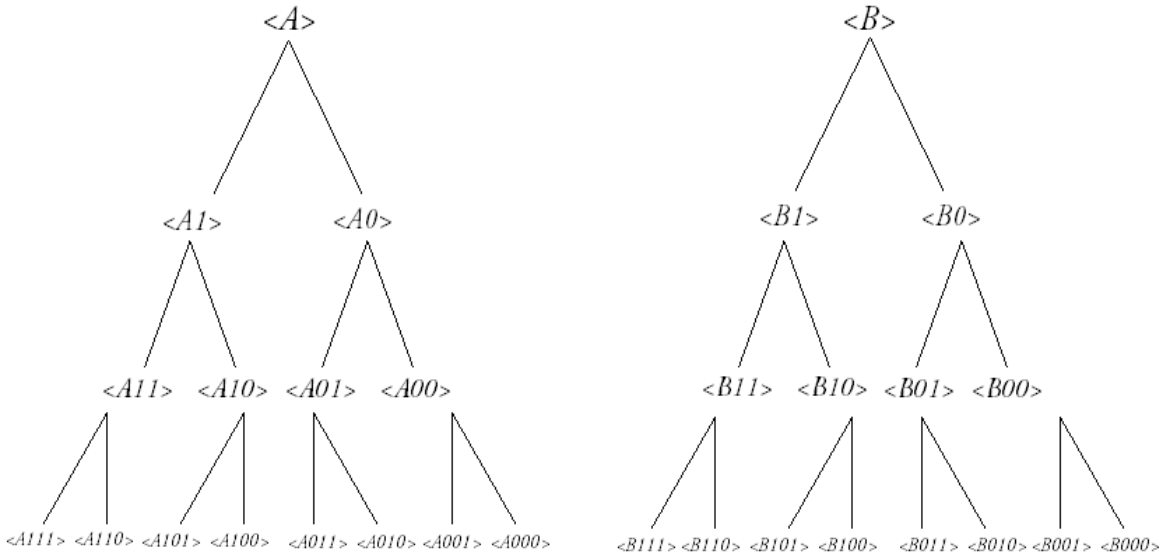

Fig. 6 – Kantian Containment/Exclusion Nexus

In this diagram is represented yet more Porphyrian trees in which relations of containment and exclusion are mapped in terms of dichotomous division. Unlike Fig.5 above, however, only one Latinate letter appears in any given tree. The remainder of the tree is then comprised of mutually exclusive pairs of concepts (each differentiated in binary) which are themselves in turn divided dichotomously.

On this picture, then, it would perfectly possible for Kant to both eat his cake and have it too. For whilst he could explain how concepts can stand in both containment/exclusion relations to *certain* concepts, he would also be able to explain how it is possible that they nonetheless fail to stand in any such relations to various others and thus allow room for the possibility of synthetic, coordinate combinations of concepts, the truth or falsity of which is not determined by containment or exclusion relations. For example, following the model of Fig.6, one could say that a concept like <*A10*> contains a concept like <*A1*>, excludes concepts like <*A01*> and <*A11*>, and yet is also capable of standing to any of the B-concepts in a relation of 'belong[ing] to one another, […] as parts of […] a synthetic combination of intuitions' (A8/B12). If one were to flesh this picture out with more substantial, empirical concepts used in the examples given above, one could understand the concept <*cat*> as containing the concept <*feline*>, excluding the concept <*tiger*> and yet being capable of standing in a purely synthetic relation of belonging

in virtue of particular intuitional experiences to the concept <*sleep*>. Furthermore, this would explain why reflection on the concept <*cat*> alone can provide no insight into whether cats are sleepers. For in order to determine whether or not this is the case, one would need to 'advance beyond the given concept, viewing it as in relation with the concept something altogether different from what was thought in it' (A154 / B193-4).

Of course, none of these observations will amount to very much unless some solid textual basis can be advanced for thinking that Kant explicitly rejects the complete closure of the conceptual schema. However, just such evidence can be found in Kant's discussion of the 'Regulative Employment of the Ideas' in the Appendix to the Transcendental Dialectic. Therein Kant argues that the faculty of reason 'presupposes an idea, namely, that of the form of the whole of knowledge' and that it consequently takes the 'whole range of knowledge obtained for us by the understanding' and 'seeks to achieve its systematisation', i.e. to organise it into 'a system connected by necessary laws' (A645 / B673). Specifically, he argues that reason achieves this by imposing three principles on the operation of the understanding. The first of these he terms the 'principle of the *homogeneity* of the manifold' (A657 / B685) and suggests that this constrains the understanding insofar as 'homogeneity is necessarily presupposed in the manifold of possible experience' and that without it 'no empirical concepts, and therefore no experience, would be possible' (A654 / B682). The second principle which he labels the 'principle of *specification*' is the inverse of the first. It demands that 'every genus requires diversity of species' and thus that 'no species be regarded as being in itself the lowest' (A655 / B683). The practical consequences of this demand of reason on the judging subject is that they are led to 'constantly endeavour[r] to differentiate nature' into further and further species (A655 / B683). Finally, the third principle which Kant calls the 'principl[e] of […] continuity' (A658 / B686) is said to demand the 'affinity of all concepts' (A657 / B685). That is to say that it directs the judging subject to assume that all concepts can be ordered hierarchically into a single system.

These principles, in particular the third, naturally lead one by inclination of reason to suppose that it is impossible for there to be multiple, intensionally independent closed systems of concepts in the

manner suggested by Fig.6. Specifically, Kant writes that in so far as reason supposes there to be 'no void in the whole sphere of all possible concepts' it seems to follow to the misguided speculative philosopher that 'there are not different, original, first genera, which are isolated from one another, separated, as it were, by an empty intervening space' (A659 / B687). Instead one is led to suppose that 'all differences of species border upon one another, admitting of no transition from one to another' (A659 / B687).

Crucially, however, Kant is clear that these principles are 'mere ideas for the guidance of the empirical employment of reason' (A663 / B691), i.e. '*maxims* of reason' (A666 / B694). What this means is that necessarily the ideas in question are those 'which reason follows only as it were asymptotically, *i.e.* ever more closely without ever reaching them' (A663 / B691). The goal of systematically unifying all knowledge obtained by the understanding, of determining 'the highest concept […] which comprehends under itself all manifoldness – genera, species and subspecies' (A659 / B687), is merely regulative. It is therefore, by Kant's lights, the mistake of those philosophers like Leibniz and Wolff who seek to construct an '*intellectual system of the world*' (A270 / B326) that, in so far as they fail to acknowledge the transcendental and regulative status of the principle of the continuity of the system of concepts, they apply it imminently, assuming there to be 'a certain systematic unity [to] all possible empirical concepts' (A652 / B680). However, properly construed, the notion of a completely determinate web of concepts standing in genus and species relations to one another is, Kant claims, 'a mere idea, to which no congruent object can be discovered in experience' (A661 / B689); an idea which, if 'taken as yielding objective insight' will inevitably count as 'a positive hindrance, and cause long delays in the discovery of truth' (A668 / B696).

Furthermore, Kant is clear that, in its proper transcendental employment, 'the method of looking for order in nature in accordance with [the principle of continuity] […] is certainly a legitimate and excellent regulative principle of reason' (A668 / B696), one which 'serves to give these concepts the greatest [possible] unity combined with the greatest [possible] [logical] extension.' (A644 / B672).[55] In

[55] The two additions of the word 'possible' in this quotation are Kemp Smith's; the addition of the word 'logical' is my own.

other words, in aiming towards the '*focus imaginarius*' of a perfected and complete science of empirical concepts, one's organisation of empirical concepts into genus and species relations with one another is advanced and rendered maximally organised. Of course, having the end goal of this perfected and complete science in one's purview is dependent upon the implicit supposition that there is just one closed system of concepts. But, for Kant, it would be the grossest error of dialectical reason to mistake this supposition for a constitutive, empirical principle as opposed to a regulative, transcendental one.

2.3 – ANALYTIC AND SYNTHETIC QUANTITIES OF JUDGEMENTS

In summary, then, one could say that Kant allows for the possibility of judgements the truth or falsity of which is not a priori knowable by conceptual analysis alone by denying that there is a single interconnected web of containment and exclusion relations in which all concepts stand to one another, i.e. by denying that there is an '*intellectual system of the world*' (A270 / B326). In doing so, Kant then allows for the possibility that intensionally unconnected concepts can be brought together in intuition to form a judgement which is known to be true only a posteriori in virtue of being given in experience. For example, one can come to know that the intensionally unconnected concepts <*cat*> and <*sleep*> together form the true judgement of experience [this cat is sleeping] by means of one's having an experience in which these two concepts are brought together in intuition.

Notably, any such a judgement can be seen to lack the four characteristics of analytic judgements outlined at A7 / B10-11 and A151 / B191:

viz. (A) the predicate concept is *not* contained in the subject concept but instead 'lies outside [it]' (A7 / B10);

viz. (B) the connection between the subject and predicate concepts *cannot* be thought through identity;

viz. (C) what it asserts is epistemically ampliative, not merely explicative (i.e. it tells one more than one could know merely by possessing the concept <*cat*> or the concept <*sleep*>);

viz. (D) its truth cannot be known in accordance with the principle of contradiction (i.e. it is not the case that to deny that a cat is sleeping is to contradict oneself).

With these considerations in mind, one might suspect that in rejecting the Wolffian supposition of the systematicity and comprehensiveness of the system of concepts the compatibility of a broadly Leibnizian/Wolffian conception of logical relations with the possibility of Kantian synthetic judgements has been effectively demonstrated. However, this cannot be the end of the story. Consider again the example of a synthetic judgement of experience given above. According the standard narrative presented there, the two intensionally unconnected concepts <*cat*> and <*sleep*> are brought together in an intuition which 'relates immediately to the object and is *single*' (A320 / B377). Notably, it is in virtue of the fact that these concepts are brought together in 'a single object' (A32 / B47) which intuition represents in space and time that the judging subject recognises not that *all* cats are sleeping, but that *this single object* which is thought under the concept <*cat*> is also thought under the concept <*sleep*>. Crucially, given that for Kant 'all concepts are universal' (*Vienna Logic*, Ak. 24:909), it follows that if it weren't for the singularity of the object in which both concepts are synthetically combined, the judgement which would result from such a synthetic combination would itself be universal, i.e. it would have the form [all cats are sleeping] not as in the case above [this cat is sleeping].

To this observation one might be liable to respond that there is little reason to suppose that this fact about the quantity of synthetic combinations of concepts should render Kant's position incompatible with ascribing to him an adherence to a broadly Leibnizian / Wolffian construal of general logical relations between concepts to explain the a prioricity of analytic judgements. However, this would be to ignore the fact that on the Leibnizian and Wolffian models, logical containment relations between concepts are solely responsible for determining the quantity of propositions. The problem would appear to be that in ascribing to Kant a commitment to the Leibnizian / Wolffian models of containment and exclusion, one would also necessarily be forced to commit him to a general logical account of the quantity of judgements, one which would seem to conflict with the clearly transcendental logical account of the singularity of synthetic judgements based on experiences in which intensionally unconnected concepts are

brought together in a single object. For if Kant were indeed to hold both that the singularity of a judgement is a function of the singularity of its non-logical extension (i.e. it's object) but also a function of general logical relations between concepts, this would seem to represent a catastrophic failure of Kant to respect his own distinction between the two forms of logic. For whilst he informs the reader that general logic 'abstracts from all content of knowledge, that is, from all relation of knowledge *to the object*' (A55 /B 79), he writes that transcendental logic 'concerns itself with the laws of the understanding and of reason in so far as they relate *a priori* to objects.' (A57 / B82).

Furthermore, if this is so, it would seem that Kant's general and transcendental logic together overdetermine the question as to which judgements are singular. In other words, Kant would appear to be committed to both a *qualitative* account of singularity in terms of general logical form, and a *quantitative* account of singularity in terms of 'extensive magnitudes' (A163 / B203) given in intuition. But this cannot be right, for it is something which he explicitly rejects in the 'Concepts of Reflection' where he chides Leibniz for 'his principle of the identity of indiscernibles'. There he writes that 'even if there is no difference whatever regards the concepts, difference of spatial position at one and the same time is still an adequate ground for the *numerical difference* of the object' (A263 / B319). What Kant is clearly attempting to communicate here is the idea that it is specifically *numerical*, or quantitative, distinctness (i.e. '*numerica identitas*') which determines that an object is 'only one thing' (A263 / B319). In this way, conceptual content is never able to guarantee numerical identity or difference, as it provides no insight into spatiotemporal magnitudes which are intuitive.

With these considerations in mind, it follows that any satisfactory account of the commensurability of the interpretation of Kantian analytic judgements outlined in chapter 1 must go further than merely explaining how Kant can allow for the possibility of intensionally unconnected concepts. Specifically, it must show how in committing to a broadly Leibnizian / Wolffian conception of intensional, logical relations between concepts Kant is nonetheless able to allow for the possibility that the quantity of singular judgements, at the very least, is not determined intensionally but extensionally.

On the Leibnizian/Wolffian accounts, the quantity of *all* propositions – universal, particular *and* singular – is to be understood as yet another function of containment relations between concepts. For Wolff and Leibniz, a 'universal affirmative categorical proposition' is one in which 'the concept of the subject […] involves the concept of the predicate […] either as whole and part, or as whole and coincident whole'. [56] Notably, in this case the universality of the proposition derives from the completeness of the subsumption of the predicate concept under the subject concept. In so far as the predicate concept in its entirety is part of the subject concept, the judging subject cannot but think the former concept whenever they entertain the latter in thought.

Furthermore, a 'particular affirmative' proposition is said to be one in which 'the predicate is not contained in the notion of the subject considered by itself, but in the notion of the subject with something extra added'.[57] In other words, in these cases the part-whole relation between the subject and the predicate concepts is reversed, with the container concept standing in predicate rather than subject position. Thus, on the Leibnizian model, given that a concept like <*A*> can be contained within the more complex concept <*AB*> but also other complex concepts like <*AC*> or <*AD*>, that only *some A* is *AB*. Similarly, on the Wolffian model a particular affirmative proposition is one in which the genus concept is placed in subject rather than predicate position. A concept like <*feline*> which features at the head of a division is predicated of one of the concepts within which it is contained, e.g. <*cat*>. Given that the division of a concept like <*feline*> is exhaustive and exclusive, it follows that only some of the objects to which it applies will be cats; the others will necessarily be lynxes.

Finally, singular propositions are characterised by Leibniz as those which feature special kinds of concepts which he calls 'perfect' in the subject position.[58] A perfect concept in this sense is one which is so

[56] Leibniz, Gottfried Wilhelm (1966) [1679] 'Elements of a Calculus' from (trans. Parkinson) *Leibniz: Logical Papers*, pp.18-9

[57] Leibniz, Gottfried Wilhelm (1989) [1679] 'Samples of the Numerical Characteristic' from (trans. Ariew & Garber) *Philosophical Essays*, p.11

[58] Leibniz, Gottfried Wilhelm (1989) [1680-4] 'First Truths' from (trans. Loemakr) *Philosophical Papers and Letters* , p.268

determinate that it contains no other concepts and thus cannot be predicated of any other, i.e. 'a subject which is not [contained] within another subject'.[59] For example, the singular concept <*Felix*> is said to be perfect on the basis of the fact that nothing further can be added to it. It can thus contain other concepts, e.g. <*cat*> and <*feline*>, and thereby function as the subject term in a true proposition like [Felix is a cat], but it cannot conversely function as a predicate term for this would produce an abortive proposition like [Cats are Felix]. By extension, on the Wolffian model, perfect concepts can be understood as those that come at the terminus of a branch with no further extensions, i.e. as a species concept which is not also a genus concept.[60]

Thus, on the Leibnizian and Wolffian pictures, the quantity of propositions can be said to be an intensional characteristic of propositions, i.e. whether or not any given proposition is universal, particular or singular will be determined by facts about containment relations between concepts. In contrast, the account of the singularity of synthetic judgements of experience like [this cat is sleeping] which Kant presents in the *CPR* would appear to be *extensional*, i.e. the quantity of the judgement is determined by the quantity of its object.

The first thing to note about this point is that Kant requires an extensional account of the quantity for all synthetic judgements. The reason for this is that synthetic judgements, as we have seen above, are those in which the subject and predicate concept do *not* stand in a containment relation to one another. Rather, they are judgements in which the two intensionally unrelated concepts are nonetheless brought together in experience. As such, the quantity of universal and singular synthetic judgements could not be explained as a consequence of the subject concept containing the predicate concept and, similarly, neither could the quantity of particular synthetic judgements be explained in terms of the predicate concept containing the subject concept. In order for Kant to make sense of the possibility of judgements

[59] Leibniz, Gottfird Wilhelm (1961) [1903] 'Genera et Species Subalternae' from (ed. Couturat) *Opuscules et Fragments Inédits de Leibniz*, p.403

[60] To confuse matters somewhat another term that Leibniz uses for a perfect concept is a 'complete' concept. In order to avoid mistakenly equivocating this Leibnizian notion of a complete concept with the Wolffian one outlined previously, I have here favoured the label 'perfect concept' for those which appear at the terminus of a division tree.

like [all cats are sleeping], [some cats are sleeping] or [this cat is sleeping] in which the subject and predicate concepts do not contain one another but which nonetheless have a quantity, it is necessary for him to cash out their quantitative characteristics in another way. What's more, a transcendental account an extensional quantity is able to fulfil this function neatly.

On this account, the quantity of all synthetic judgements can be thought of as what contemporary logicians would call domain based. For example, suppose after much empirical research that one were to determine that all objects which fall under the concept <*cat*> also fall under the concept <*grumpy*>. In this case, one would have learnt a posteriori that the judgement [all cats are grumpy] is true. But this would be an extensional fact about all the empirical objects which fall under the concept <*cat*>, not a fact about the intensional content of the concept <*cat*>. Similarly, the same interpretative treatment can be extended to particular and singular synthetic judgements. A particular synthetic judgement will be about some set of objects which the judging subject has encountered in experience the concepts which they were brought under, whilst a singular synthetic judgement will be about just one such object and its concepts.

However, the crucial point here is that Kant's embracing an extensional account of quantity in the case of synthetic judgements does not force him to reject carte blanche the Leibnizian / Wolffian intensional account of the quantity with regards to specifically *analytic* judgements. The idea that the quantity of these judgements – judgements in which the subject and predicate concept do stand to one another in a relation of containment or exclusion – can be known a priori in virtue of their intensional characteristics is compatible with Kant's construing the quantity of all synthetic judgements extensionally. What's more there is clear evidence in Kant's remarks on the quantity of judgements in the *Jäsche Logic* that he distinguishes between these two different ways of determining quantity, i.e. intensional and extensional, for both universal and particular judgements. There he writes that 'in respect of the universality of a cognition, there exists a real distinction between *general* and *universal* propositions (Ak.

9:102).[61] The reader is then informed that '*General* propositions […] are those that contain merely something of the universal *regarding certain objects*', whilst '*Universal* propositions are those that maintain something universally' by means of 'sufficient conditions of subsumption [under concepts].' (Ak. 9:102). In other words, general propositions or judgements are those which acquire their generality extensionally from the fact that multiple empirical objects have been seen in distinct objective cognitions to all fall under the same concept, whilst universal propositions are those which can be known to hold universally in virtue of the fact that the predicate concept is completely subsumed within the subject concept. Furthermore, Kant elaborates by saying that whilst the former can be thought of a '*synthetically* universal', the latter can be thought of as '*analytically*' so. Kant then stipulates that synthetically universal, or general, judgements are those regarding which 'we cannot have insight into […] their universality without cognising them *in concreto*', whilst 'analytic universality' is a 'consequence of a concept' (Ak. 9:102-3).

What's more, Kant tellingly asserts that this distinction between analytic and synthetic universality 'does not have to do with logic' (Ak. 9:102). What he would appear to be indicating by this remark is that understanding the difference between these two different ways of determining the quantity of a judgement cannot be comprehended from within the domain of general logic alone. Rather, to understand this distinction one has to adopt a transcendental perspective which requires one to possess an understanding of the role of intuition in experience to fully appreciate.

As for particular judgements, Kant develops a similar distinction also. He speaks first of those particular judgements of which 'it is possible to have insight into them through reason' and those which are 'particular only by accident' (Ak. 9:103). The former, the reader is informed, are judgements in which 'the subject must be a broader [i.e. the higher] concept (*conceptus latior*) than the predicate' such that 'some of what belongs under [the subject] is [the predicate], some not' (Ak. 9:103).

However, this still leaves the original problem case of singular judgements untouched. Crucially, Kant avoids this problem by explicitly rejecting the Leibnizian / Wolffian notion of the perfect concept,

[61] Kant again here vacillates in his terminological preferences, referring to 'Satze' [propositions] instead of 'Urteilen' [judgements] at various points.

i.e. the concept which contains multiple concepts but which is not itself contained in any others, which is species but never genus. Specifically, he writes that 'in the series of species and genera there is no lowest concept' and further that the reason for this is that 'every *species* is always to be considered at the same time a *genus*' (Ak. 9:97). In fact, he stipulates specifically in a footnote to section 15 that 'Since only individual things," or individuals/ are thoroughly determinate, there can be thoroughly determinate cognitions only as *intuitions*, but not as concepts; in regard to the latter, logical determination can never be regarded as completed.' (Ak. 9:99).

Thus in this way Kant is able to ensure that 'all concepts are universal' (*Vienna Logic*, Ak. 24:909) and thus that there can only ever be analytically universal and particular judgements. In contrast, he does allow for the possibility of universal, particular *and* singular synthetic judgements.

However, one might still balk at the notion that Kant allows for the quantity of analytic and the quantity of synthetic judgements to be, in some sense, of different kinds. "Surely", one might protest, "Kant cannot possibly think that when one judges that all cats are grumpy one is making a judgement about all the cats in the world but when one judges that all cats are felines one is not!" The discomfort motivating any such a reaction is, I think, well founded. It surely cannot be the case that Kant holds that there are some judgements of or about empirical objects and some which merely appear to be about such objects but are in fact about concepts. However, I do not think that it is hard to see the way in which Kant's distinction between analytic and synthetic quantity can be preserved all whilst allowing for the possibility that for him *all* judgements are ultimately extensional, i.e. about objects, not concepts. If one construes analytic universality and particularity not as an alternative account of what the quantity of the judgement consists in but instead as an account of the way in which the quantity of a judgement can be known a priori on the basis of the intensional relation between the subject and predicate concepts, this problem quickly dissipates. For if the relations of containments between subject and predicate concepts of analytic judgements merely provide an a priori guarantee about the extensional containment relations between domains of objects, the quantity of analytic and synthetic judgements can be of the same kind. On any such a picture, the fact that the concept <*cat*> contains the concept <*feline*> provides a guarantee

that the set of all cats will be a subset of the set of all felines. In this way, the quantity of the judgement [all cats are felines] is determined by the fact that the judgement itself is of or about the set of *all* cats and the set of all felines, but this extensional set subsumption is knowable a priori in virtue of the intensional relations in which the concepts <*cat*> and <*feline*> stand in to one another. It is for this reason, I would suggest, that Kant in the *Jäsche Logic* explicitly formulates his example of an analytic judgement as involving what is in essence a universal quantifier. He writes: 'to everything x, to which the concept of body (a + b) belongs, belongs also extension (b)' (Ak. 9:111).[62]

In summary, then, Kant's variation on the Leibnizian / Wolffian model of containment and exclusion relations between concepts rejects the notion that the quantity of judgements is non-extensional but retains the notion that, for analytically universal and particular judgements, intensional relations between concepts are able to reflect extensional containment relations between sets of objects. In this way, knowing that the concept <*A*> contains the concept <*B*> is able to provide an a priori guarantee both that *all* the things which are As are also Bs and further that only some of the things which are Bs are also As. Furthermore, Kant's complete rejection of the rationalist's intensional account of the quantity of singular propositions allows him room to introduce his new transcendental-logical account of singular judgements in which universal concepts are synthetized with others by means of being instantiated in a singular, spatiotemporal magnitude. This qualification, together with the rejection of the idea that the intensional nexus of conceptual containment and exclusion relations between concepts is closed and complete, allows Kant to accommodate for the possibility of uniquely synthetic judgements all whilst retaining the rationalist's model of containment.

2.4 – THE EPISTEMIC LIMITATIONS OF CONCEPTUAL ANALYSIS

According to the picture sketched thus far, Kantian analytic judgements are to be understood as those in which the subject concept contains (or excludes) the predicate concept, where this intensional relationship

[62] In addition, Kant writes in the Ideal of Pure Reason of the analytic proposition 'a triangle has three angles' (A593 / B621) that it 'does not declare that three angles are absolutely necessary, but that, under the condition that there is a triangle (that is, that a triangle is given), three angles will necessarily be found in it.' (A594 / B622).

between the two concepts is able to provide an a priori extensional guarantee that whatever objects fall under the former concept will necessarily also fall under the latter. In contrast, synthetic judgements are to be understood as those in which the subject and predicate concepts do not stand to one another in any relation of containment or exclusion to one another but which are brought together in either a singular extensive magnitude given in intuition (i.e. in the case of a judgement of experience) or in multiple such magnitudes given in experience, such that one can know a posteriori that the conjunction of those concepts in a given judgement is objectively valid.

Put crudely, one might say that in modern quantificational notation an analytic judgement would be scoped by a universal quantifier, whilst a synthetic judgement would be scoped by an existential quantifier. For example, the analytic judgement [all cats are felines] would be formalised as follows:

$\forall x\,[Cx \rightarrow Fx]$.[63]

Meanwhile, the synthetic judgement [this cats is sleeping] would be formalised thus:

$\exists y\,[Cy \wedge Sy]$.

What is particularly revealing about comparing these two formulations is that it exposes the fact that Kantian synthetic judgements are on this reading defined by a logical structure which, relative to Leibnizian / Wolffian propositions, is radically new. Namely, this special class of judgements are existentially committal in a way that Leibnizian / Wolffian propositions and analytic judgements are not. Even when interpreted extensionally, as I have argued in the previous section Kantian analytic judgements should be, judgements like [all cats are felines] are here understood as being fundamentally conditional. For whilst it is a necessary truth, on this picture, that if there are any cats, they will any and all be felines, it is only *if* there is in fact something which is a cat that it will it necessarily also be a feline. Crucially, judging that all cats are felines on the basis of the intensional relationship between the concepts <*cat*> and <*feline*> alone provides no guarantee that there is in fact anything which is a cat – this existential fact

[63] An analytically particular judgement could be analogously formalised as $\forall x\,[Fx \rightarrow [Cx \vee Lx]]$.

cannot be known a priori merely by means of a familiarity with the intensional characteristics of the concept <*cat*>.

It is for this reason that Kant writes both that '[i]n the mere concept of a thing no mark of its existence is to be found' (A225 / B272) and further that a concept is 'not by any means sufficient to determine […] the possibility [potential actuality] of such an object as it is thought through the concept' (A220 / B268). In this sense, a concept like <*cat*>, whilst in fact having an non-logical extension (i.e. the set of all things which fall under it) which has a quantity (600 million or so), is merely a 'heading, under which many items of knowledge fall, a logical location' (A268 / B324), i.e. a general presentation by means of which a judging subject can cognise a given object.

Similarly, Leibniz too explicitly stipulates that he 'consider[s] universal concepts, i.e. ideas and their combinations' in this way, i.e. 'as they do not depend on the existence of individuals'[64]. For Leibniz, this approach is somewhat advantageous to his rationalist project for it enables him to claim that 'any truth whatever can be justified' in terms of 'the connection of the predicate with the subject' which is 'either evident in itself as in identities, or can be explained by an analysis of the terms',[65] and thus also that all truths can be understood to be 'eternal'.[66]

In contrast, on the Kantian model, when one judges synthetically that [this cat is sleeping], one knows, in so far as this particular cat is given in intuition, that it exists. It is, Kant tells us, 'the perception which supplies the content to the concept is the sole mark of actuality' (A225 / B273) and one can 'know the existence of the thing' only in this way or 'in an a priori manner, if [the object] only be bound up with certain perceptions, in accordance with the principles of their empirical connection (the analogies)' (A225 / B273). In other words, only in so far as something is given to one in experience, either immediately or

[64] Leibniz, Gottfried Wilhelm (1966) [1679] 'Elements of a Calculus' from (trans. Parkinson) *Leibniz: Logical Papers*, p.20

[65] Leibniz, Gottfried Wilhelm (1989) [1679?] 'Of Universal Synthesis and Analysis' from (trans. Loemakr) *Philosophical Papers and Letters* , p.232 (my emphasis)

[66] Leibniz, Gottfried Wilhelm (1989) [1697] 'On the Ultimate Origination of Things' from (trans. Ariew & Garber) *Philosophical Essays*, p.152

mediately by means of some other perception connected to it by the a priori principles, can one know a posteriori of that object's existence.

The historical importance of this characteristic of Kantian synthetic judgements cannot, I think, be overstated. In what remains of this chapter I will set out some reasons for thinking that at least some part of the motivation for Kant's introduction of this new class of judgements was that, in contradistinction to their Leibnizian /Wolffian analytic counterparts, they were able to provide a satisfactory analysis of existential judgements. In this sense, I will be suggesting that a significant part of the importance for Kant of drawing the analytic / synthetic distinction was in order to draw attention to the defects of the Leibnizian / Wolffian theory of the proposition, specifically, its difficulty explaining what grounds the truth of existence claims.[67]

In order to make sense of this, however, it will first be necessary to take a make minor detour in order to establish just what exactly Kant's dissatisfaction with the Leibnizian / Wolffian analysis of existential propositions consists in. The problem for Leibniz and Wolff of explaining the truth conditions of existential propositions, i.e. propositions of the form [*X* exists], is that they were unwilling to extend their containment / exclusion account of truth to all such cases. That is to say that they were both unwilling to accept the position that the truth of all propositions like [*X* exists] consists in the fact that the concept <*X*> contains the concept <*existence*>, such that, much like any other proposition, existential propositions have a structure of the form [*X* = *XY*]. Furthermore, both seem to provide the same reasons for this. On the one hand, Leibniz admits in his Monadology that 'the essences or possibilities' expressed by intensional subject-predicate propositions are not guaranteed a 'reality', but says that this reality is contingent upon 'something existent and actual', not upon those concepts containing the further concept

[67] No doubt Kant's reasons for rejecting Leibnizan / Wollfian rationalist programmes of philosophy are far more extensive than these logical considerations alone, and it would be grossly reductive (and historically implausible) to suggest that Kant's critical turn and his sympathies with empiricism were solely motivated by them. However, I would nonetheless urge that any proper understanding of the character of Kant's analytic / synthetic distinction depends upon a full appreciation of Kant's dissatisfaction with the Leibnizian / Wolffian theory of the proposition and the model of systematic philosophy built upon it. Furthermore, I think that this interpretative hypothesis provides further support for the unified reading built around the containment characterisation that I favour.

<*existence*>. Specifically, he writes that this reality 'must be founded on the existence of a necessary being'.[68] Similarly, Wolff writes in his Vernünftige der Gedanken that 'everything that exists has its sufficient ground why it exists rather than does not exist' and further that 'that ground must be found either within [an existent thing] or external to [it].' In addition, he stipulates that if this ground is 'to be found within [the existent thing], then [that thing] exist[s] necessarily' (i.e. if the concept of the existent thing contains the concept <existence>), but also that if this ground is 'to be found in something else, then that something else must have in itself its ground why it exists and thus exists necessarily.'[69]

What these passages indicate is that both Leibniz and Wolff adhere to the view that the existence of merely 'contingent things' (rerum contingentium)[70] depends upon the necessary existence of something else more ontologically basic; something which is capable of serving as the existential ground for the various possibilities mapped out by the relations between concepts and expressed by subject-predicate propositions. What's more, the 'essence [i.e. concept]' of that ontologically basic thing is said to 'include existence'[71] and it is this fact which is supposedly responsible for its own necessary existence. Furthermore, both philosophers are unambiguous that this 'necessary being'[72] is God and that He 'alone […] has the privilege of necessarily existing'.[73]

In short, what this means is that both Leibniz and Wolff are committed to a distinction between the way in which contingent things will necessarily exist should they come to be actual and the question

---

[68] Leibniz, Gottfried Wilhelm (1989) [1714] 'The Monadology' from (trans. Loemakr) *Philosophical Papers and Letters* , p.647

[69] Wolff, Christian (2009) 'Rational Thoughts on God' [1720] from (trans. Watkins) *Kant's Critique of Pure Reason: Background Source Materials*, p.51

[70] Leibniz, Gottfried Wilhelm (1961) [1676] 'Du Principe de Raison' from (ed. Couturat) *Opuscules et Fragments Inédits de Leibniz*, p.13 (my translation)

[71] Leibniz, Gottfried Wilhelm (1989) [1714] 'The Monadology' from (trans. Loemakr) *Philosophical Papers and Letters* , p.647

[72] Wolff, Christian (2009) 'Rational Thoughts on God' [1720] from (trans. Watkins) *Kant's Critique of Pure Reason: Background Source Materials*, p.51

[73] Leibniz, Gottfried Wilhelm (1989) [1714] 'The Monadology' from (trans. Loemakr) *Philosophical Papers and Letters* , p.647

as to whether or not those contingent things will in fact come to be actualised. The former depends upon purely intensional relations between concepts, the latter on 'the divine will [as] the source of actuality'.[74] Of course, this then raises the further question for these rationalist thinkers as to what governs God's will, i.e. what reason God has for bringing into existence the contingent things which he actualises. At this point, logical considerations are put to one side and broadly theological ones take centre stage. Infamously, Leibniz's answer to this question involves his claim that God's goodness leads him to actualise the best of all possible worlds. According to this picture, there is 'an infinity of possible [worlds] in the ideas of God' but of these 'only one can exist'.[75] What's more, in virtue of the fact that the concept <*goodness*> is contained in the concept <*God*>, Leibniz urges that in 'the fitness or […] degrees of perfection which these worlds contain' provides 'a sufficient reason for God's choice.' In consequence of these various considerations, Leibniz concludes that God's 'goodness makes him choose […] the existence of the best'.[76] This idea is then echoed in Wolff, where he writes that God's will is governed by His desire for 'the greater perfection of things'.[77]

A consequence of this view is that whilst the concept of a contingent thing does not contain the concept of existence, it will nevertheless, insofar as it exists, contain a set of predicate concepts which will determine that its existence would make it part of the best possible world. In this way, Leibniz and Wolff attempt to preserve their commitment to the maxim that all truth consists in containment, identity and exclusions relations whilst still affording God alone the status of 'necessary being'.[78] God chooses to make

[74] Wolff, Christian (2009) 'Rational Thoughts on God' [1720] from (trans. Watkins) *Kant's Critique of Pure Reason: Background Source Materials*, p.51

[75] Leibniz, Gottfried Wilhelm (1989) [1714] 'The Monadology' from (trans. Loemakr) *Philosophical Papers and Letters* , p.648

[76] Ibid., p.648

[77] Wolff, Christian (2009) 'Rational Thoughts on God' [1720] from (trans. Watkins) *Kant's Critique of Pure Reason: Background Source Materials*, p.51

[78] Leibniz, Gottfried Wilhelm (1989) [1714] 'The Monadology' from (trans. Loemakr) *Philosophical Papers and Letters* , p.646

actual those contingent things which, given their logical character (i.e. the concepts they contain), best suit his ends, i.e. the creation of the best of all possible worlds.

On this picture, then, the rationalist holds that a regular subject-predicate proposition such as [*A* is *B*], in so far as it is understood intensionally, is existentially non-commital (i.e. that it should be understood as equivalent to the conditional proposition [If there is something which is A, then it is also B]). Now, any other categorical proposition that one might forward to the end of determining that there is something which is A, e.g. [*A* is *C*], will necessarily also be conditional in form (i.e. equivalent to the proposition [If there is something which is A, then it is also C]). This regress threatens to be vicious and so the rationalist posits that there is one particular proposition which is able to put an end to it; namely, the proposition [God exists]. The great idea here is that this special proposition and this proposition alone is both equivalent to the conditional proposition [If there is something which is God, then it is also exists] and yet also able to provide sufficient grounds for accepting that the antecedent clause of that conditional holds. For given that the concept <*God*> contains the concept <*existence*>, to deny that God exists would be contradict oneself. This then supposedly puts an end to the regress on the grounds that God's existence gives a principled basis on which to determine of every other conditional whether its antecedent holds.

Kant's criticism of this view can be traced back at the very least to his 1763 essay 'The only possible argument in support of a demonstration of the existence of God', written prior to his having established the distinction between analytic and synthetic judgements. There he clearly sets out the body of an argument which would later form the basis of rejection of the ontological argument in the *CPR*. Crucially, he rejects the supposition of the Leibnizian and the Wolffian idea that existence is '*a predicate or a determination of a thing*' (Ak. 2:72). His argument runs that were one to inventory all the predicates of a real being and all the predicates of that same being were merely possible, the two lists would be the same: 'no more is posited in a real thing than is posited in a merely possible thing, for all the determinations and predicates of the real thing are also to be found in the mere possibility of that same thing.' (Ak. 2:75) For this reason, Kant suggests, 'one does not examine the concept of the subject in order to demonstrate the correctness of the proposition about the existence of such a thing' (Ak. 2:72);

instead 'one examines the source of one's cognition of the object', i.e. 'one says: 'I have seen it' or 'I have heard about it from those who have seen it' (Ak.2:73). It thus follows that one cannot come to know of the existence of anything by means of determining it to hold of 'logical necessity', for 'the necessity of existence' – if there is such a thing – must hold of 'absolute *real* necessity' (Ak. 2:82).[79] For this reason the Leibnizian / Wolffian strategy to ending the regress of conditional propositions simply will not do. It is simply a gross philosophical error to assume that existence is a predicate, a predicate which could then feature as the necessary mark of a concept. Thus, whilst it may seem that 'if I say: 'God is an existent thing' it looks as if I am expressing the relation of a predicate to a subject', in fact 'there is an impropriety in this expression' and 'the matter ought to be formulated like this: 'Something existent is God'.'

By the time Kant formulates these objections to the Leibnizian / Wolffian analysis of existential propositions in the Ideal of Pure Reason of the *CPR* he has developed fully his analytic / synthetic distinction such that he can reformulate this argument in these terms. The 'logical criterion of possibility' he informs the reader therein is that 'a concept is always possible if it is not self-contradictory' (A596 / B624 fn.). Analytic judgements thus hold of 'logical necessity' (A594 / B622) in so far as their necessity follows from the fact that to deny any such a judgement renders a contradiction. But Kant warns the reader that this 'necessity of the judgment is only a conditioned necessity […] of the predicate in the judgment' and is not to be confused with the 'necessity of things' (A593 / B621). This latter kind of necessity, i.e. necessary existence, Kant writes, could not be a species of logical necessity for 'if we reject subject and predicate alike, there is no contradiction' (A594 / B622). That is to say that logical necessity, in turning on the intensional relations between concepts, is the necessity characteristic of a conditional and thus that it itself provides no guarantee that the antecedent holds. For this reason, Kant asserts 'there is no contradiction in rejecting […] the concept of an absolutely necessary being' (A594 / B622), for 'if its existence is rejected, we reject the thing itself with all its predicates; and no question of contradiction can then arise' (A595 / B623). In other words, one need only deny the antecedent of the Leibnizian /

[79] My emphasis.

Wolffian conditional proposition [If there is a God, he exists] and their means of halting the regress is lost.

Consequently, Kant informs us, 'however much […] our concept of an object may contain, we must go outside it, if we are to ascribe existence to the object' (A601 / B629) and his conclusion is thus that 'all existential propositions are synthetic' (A598 / B626). But it follows from this that one cannot 'profess to maintain that the predicate of existence cannot be rejected without contradiction,' in the way that both the Leibnizian and the Wolffian do. For 'this is a feature which is found only in analytic propositions, and is indeed precisely what constitutes their analytic character' (A598 / B626). In other words, Kant denies the Leibnizian / Wolffian their solution to the regress of conditionals and thus undercuts their account of existential propositions.

To summarise, then, I would urge that not only is ascribing to Kant a view of conceptual containment in the Leibnizian / Wolffian mould compatible with his commitment to the possibility of distinctively synthetic judgements (as I have argued in sections 2.2 and 2.3 above), but also that interpreting Kant's talk of containment in this way can help to make sense of the rhetorical function of the analytic / synthetic distinction in the *CPR*. In separating what are essentially Leibnizian / Wolffian style propositions which are existentially free from genuinely informative synthetic judgements which are existentially committal, Kant is able to demonstrate the expressive limits of Leibnizian and Wolffian philosophical methodology and the hopelessness of the metaphysical ambitions born out of it.

3 – TRUTH IN VIRTUE OF CONCEPTS?

3.1 – EPISTEMOLOGICAL VS. METAPHYSICAL READINGS OF KANTIAN ANALYTICITY

Thus far I have been engaged in outlining and defending a reading of Kant's account of analytic judgements according to which their distinctive epistemic and psychological characteristics (i.e. their necessary truth or falsity being knowable a priori) is explicable in terms of their constituent concepts standing in logical, intensional relations of containment and exclusion to one another. Furthermore, I argued that whilst Kant adopts these notions of intensional containment and exclusion from the term logics of his rationalist forebears, he does so whilst making certain radical adjustments to the standard logical doctrines on which these Leibnizian / Wolffian models were based. Doing so, I argued, enabled Kant to introduce the possibility of distinctively synthetic judgements, judgements which were better suited to handling judgements involving existence claims than their analytic counterparts.

In this final chapter, I want to turn to the thorny question as to what exactly makes Kantian analytic judgements true. Initially, one might think that this question has already been answered by the interpretative enterprise with which we have so far been engaged. Specifically, one might assume that in so far as Kant follows Leibniz and Wolff in thinking that analytic judgements are those in which the subject concept contains or excludes the predicate concept, he also follows them in thinking that these relations are what determine whether or not it is true. According to any such a picture, intensional relations like that of containment between concepts such as <*cat*> and <*feline*> simply *make it true* that all cats are felines.[80] In this way, the unified reading defended in the previous two chapters would be construed as providing a substantive account of the truth-ground of analytic judgements.

[80] Similarly, one might suspect that the exclusion relation between <*cat*> and <*tiger*> *makes it false* to assert that some cats are tigers.

This view has a certain prima facie appeal to it. Kant is famously insistent in his opening remarks of the transcendental logic that objective cognition [Erkenntnis][81] 'springs from two fundamental sources of the mind', i.e. receptivity and spontaneity, and that, consequently, 'intuition[s] and concepts constitute […] the elements of all our knowledge' (A50 / B74). In so far as they guarantee 'the actuality of a thing' (A234 / B286), intuitions are that through which 'an object is *given*' whilst concepts 'enable us to *think* the object of sensible intuition' by 'refer[ring] to it mediately by means of a feature which several things may have in common' (A320 / B376-377).

With this picture in mind, surely one could suggest that, in so far as concepts stand in fixed and determinate intensional containment and exclusion relations to one another, objective cognition must be constrained by these relations. For given that according to Kant (i) cognising an object requires bringing it under a concept and further that (ii) when one thinks an object under any concept <*A*> they also necessarily think it under the concepts which <*A*> contains, it would seem to follow that the objects which one cognise will have reflected in them the containment relations between concepts. On this picture, it would turn out that the fact that every cat that one encounters in the empirical world is a feline follows from the fact that whenever a particular object is brought under the concept <*cat*>, it will necessarily also be thought under the concept <*feline*>. According to this account, it follows not only that containment and exclusion relations between concepts provide an a priori guarantee that what they assert holds, but also that they *make it the case that* the relations between the respective sets of objects which fall under these concepts in the empirical world obtain. On this reading, the intensional facts are responsible for the extensional ones, logical relations between concepts constrain empirical reality (e.g. that <*cat*> contains <*feline*> is what makes it the case that all cats are felines).

[81] One point of significant interpretative divergence between the Kemp Smith (2007) [1929] and Guyer (2000) [1998] translations is that whilst Kemp Smith translates 'erkenntnis' as 'knowledge', Guyer translates it as 'cognition'. I favour Guyer's reading but have chosen otherwise to quote the Kemp Smith translation in light of its greater perspicacity and literary elegance. Consequently, I have here substituted, whenever appropriate, Kemp Smith's reading of 'erkenntnis' with Guyer's in the quoted passages. This is marked by the standard square bracketing.

One might think of this way of reading Kant's account of the truth of analytic judgements is as being broadly nominalistic. One supposedly brings an object under a concept with its own intensional characteristics, characteristics which are not reflective of anything which is given in intuition but which merely belong to the concept as such. Consequently, these intensional characteristics of concepts can be said to determine facts about the empirical world not by responding in some way to what has been given in experience but, rather, by simply imposing certain classificatory distinctions onto those objects which are thought under them. Thus, on this picture, there are features of the empirical world which have nothing to do with what is given in experience and everything to do the intensional relations in which concepts stand to one another, i.e. features of the empirical world which are imposed onto it by our non-empirical conceptual schemata.[82]

To borrow a distinction from the literature on analyticity in contemporary philosophy of language,[83] one might call any such an account of analytic judgements a "*metaphysical*" as opposed to an "*epistemological*" one. What this contrast supposedly amounts to is that between two different kinds of philosophical account of analyticity. The first of these, the so-called metaphysical account, claims that analyticity is a property of certain truth-bearers (i.e. analytic judgements/sentences/propositions) which *makes them true*. The second claims in contrast that it is a property of those truth-bearers which *enables one to know a priori that they are true*, but which does not make them true. Thus, to read Kant's account of analytic judgements in the nominalistic fashion outlined above is to ascribe to him a view according to which to call a judgement analytic is to say of it that has a certain property (i.e. its concepts either contain or exclude one another) which makes it true.[84] To borrow (and slightly adjust) another modern idiom,

[82] This interpretation of Kantian analyticity would render it strikingly analogous to the linguistic model of analyticity put forward by Carnap (1952) according to which an analytic sentence is one in which the conventions of our use of certain words dictate that they have common meanings and, thus, that the sentences themselves are true in virtue of these meanings.

[83] This distinction is originally due to Boghossian (1996, 2003) but has since been adopted by others in their discussions of analyticity. Cf. Williamson (2008), ch.4-5; Russell (2008).

[84] The use of the label 'metaphysical' here to refer to any view according to which analyticity is a truth-making property of judgements is problematic given that this usage reflects a more contemporary notion of the term

one might say that, on this picture, Kantian analytic judgements would be true solely in virtue of their concepts.

In my opinion, the arguments in favour of any such a nominalistic, "metaphysical" reading of Kant's conception of analyticity as that outlined above are pretty weak. For one thing, in order to motivate any such a position one would have to essentially ignore Kant's frequent reminders that empirical concepts – the kinds of concepts which almost invariably feature in Kant's examples of analytic judgements[85] – as *empirical*, are 'given […] a posteriori' (A47 / B64). That is to say that these concepts are formed in light of what is given in experience. Furthermore, one would be forced to embrace what Newton (2015) has called 'the rationalist, innatist view that [all Kantian concepts] are pre-determined in

---

'metaphysics'. On this standard contemporary picture, metaphysics is thought to concern itself with something like 'what fundamental kinds of things there are and what properties and relations they have' (Williamson (2008)) and so can be properly distinguished from both epistemology and the philosophy of language. In contrast, Kant has his own way of understanding metaphysics which is not so clearly separated from epistemology; namely, as 'the whole of pure philosophy, inclusive of criticism, and so as comprehending the investigation of all that can ever be known a priori' (A841 / B869). Undeniably, there are deep differences between these two ways of cashing out what metaphysics is, and it can seem clumsy and confusing to equivocate over this term in the way that I am doing here. However, I think for my purposes this contemporary distinction can be of some use and rather than complicating matters by changing the terminology, I have here opted to retain the title 'metaphysical account of analyticity' in spite of the potential exegetical disadvantages doing so has. At the very least, I hope that doing so is less confusing and potentially misleading than introducing new terminology to draw the same distinction.

[85] Kant provides few explicit examples of analytic judgements in either the *CPR* or the other critical-era texts. Those that he does provide are (i) 'All bodies are extended' (A7 / B11) (also appears in the *Jäsche* as 'To everything x, to which the concept of body (a + b) belongs, belongs also extension (b)' (Ak. 9:111) and in the *Blomberg* as 'A body is divisible' (Ak. 24:232)), (ii) 'No unlearned man is learned' (A153 / B192), (iii) 'Gold is a yellow metal' (Ak. 4:267) and (iv) 'man is a rational animal' (Ak. 24:937). All of the concepts involved in these examples (i.e. <*body*>, <*extended*>, <*learned*>, <*Gold*>, <*yellow metal*>, <*man*>, <*rational animal*>) are seemingly what Kant would call empirical. One notable exception to tis rule is the example provided in the B-edition Paralogisms which Kant also says is analytic; namely, 'in all the manifold of which I am conscious I am identical with myself' (B408). However, this particular judgement seems very far from meeting Kant's already established conditions for counting as an analytic judgement as it is not even of subject-predicate form. For these reasons, I think it is safe to assume that, even in spite of this seeming counterexample, Kant for the most assumes analytic judgements to be categorical subject-predicate assertions involving empirical concepts in both the subject and predicate positions.

an order of reason,'[86] a concession which would require one to turn a blind eye to those remarks in the Appendix to the Transcendental Dialectic discussed in the previous chapter regarding the idea of a perfected system of concepts being merely regulative.

However, in rejecting this broadly nominalistic kind of reading, one is also essentially denying that Kantian analyticity is metaphysical, i.e. that Kantian analytic judgements are true in virtue of their concepts. For unless the containment and exclusion relations between concepts are determined entirely independently of what is given in intuition, it is not possible for one to assert that the truth-making buck stops with the relationships between the concepts themselves. Rather, if these relationships between concepts which constrain cognition are themselves constrained by what has been given in experience, it would seem that it is the given which is ultimately responsible for the fact that what is asserted by an analytic judgement is true. For even if the intensional relationship between the concepts <*cat*> and <*feline*> is what provides the judging subject with the guarantee that all the things which are cats are felines, the mere fact that this intensional relationship has been established a posteriori in light of experience means that it must be reflective of something real.

Of course, this is not to say that the containment relations between concepts on this picture become insignificant. Rather, it is simply to point out that, on this view, their significance derives from their special epistemic function, not from their being truth-makers of a special class of judgement. In so far as concepts, as representations, are 'determinations of the mind' (A34 / B50), and in so far as certain concepts can be said to entirely contain others, it follows that one can know *a priori* that any empirical object which falls under the larger concept necessarily falls under the smaller concept which is contained within it. But the fact that it is a truth about objective, empirical reality that all cats are also felines is not determined just by the fact the one concept contains the other but by the fact that these concepts (and their partial identity) have an 'objective reality' (A639 / B667) grounded in the fact that they have been acquired a posteriori based on what has been given in intuition.

[86] Newton, Alexandra (2015) 'Kant on the Logical Origin of Concepts', p.473

In this way, an epistemological reading of Kantian analyticity renders the intensional containment and exclusion relations between concepts transparent to some facts about what is given in experience, which are themselves ultimately responsible for the truth of analytic judgements. It is then these facts about experience which make the judgement [All cats are felines] necessarily true, whilst the containment relation between the two concepts renders this fact a priori knowable. It is my view that some such epistemological interpretation of Kant's view of analytic judgements must be right and in the remainder of this chapter I aim to make a start at providing some account as to what such an interpretation might amount to. Obviously given the complexity and seeming intractability of the issue of empirical concept formation in the *CPR*, a full and comprehensive treatment of these matters in an interpretative piece of this length will not be possible. However, as I will show in the following section, I think that it is nonetheless possible to tentatively suggest a way in which one can make sense of how for Kant containment and exclusion relations between genus and species concepts come to be established a posteriori and, furthermore, how this confers objective reality on analytic judgements without getting caught up in the heated debates surrounding the role of intuitive content in determining conceptual content.[87]

3.2 – USING CONCEPTS TO FORM CONCEPTS

Kant's most detailed remarks on empirical concept formation can be found in §§3-6 of the *Jäsche Logic*. First the reader is informed that 'an empirical concept arises from the senses through comparison of objects of experience and attains through the understanding merely the form of universality' (Ak. 9:92) and then further that this universality which empirical concepts acquire through the understanding 'rests on reflection and on abstraction from the difference among things that are signified by a certain representation' (Ak. 9:93). Kant then proceeds to reiterate these three 'logical actus of *comparison, reflection and abstraction*' are 'the essential and universal conditions for generation of every [empirical]

[87] For a detailed discussion of these issues see Sellars (1997 [1956]), McDowell (1994), Hanna (2005) and Allais (2009).

concept whatsoever' (Ak. 9:94). Subsequently, he elucidates the way in which these three components jointly contribute to the formation of any empirical concept by means of the following example:

> 'I see, e.g., a spruce, a willow, and a linden. By first comparing these objects with one another I note that they are different from one another in regard to the trunk, the branches, the leaves, etc.; but next I reflect on that which they have in common among themselves, trunk, branches, and leaves themselves, and I abstract from the quantity, the figure, etc., of these; thus I acquire a concept of a tree.' – *Jäsche Logic* (Ak. 9:94-5)

The idea here, put simply, appears to be that in encountering in a singular consciousness three spatio-temporally distinct objects with common characteristics, one is able to identify those common features and abstract away the ways in which they differ to form a new concept under which all three objects can be brought. In Kant's example, the judging subject encounters three distinct objects (i.e. a spruce, a willow and a linden), notes that all three have a trunk, branches and leaves and abstracts away from all the non-shared characteristics (e.g. the elongated character of the willow's leaves, perhaps, or the differential fragrances of the spruce and the linden) the concept <*thing with a trunk, branches and leaves*>, i.e. the concept <*tree*>.

As many commentators have noted,[88] this account of empirical concept formation appears problematic for various reasons. Perhaps most notably, Hannah Ginsborg (2006) has argued forcefully that it fails as an account of how singular representations can be said to serve as the basis for forming a universal ones. This argument has a certain intuitive appeal. Kant is clear that that which is 'given […] *a posteriori*' (Ak. 9:93) is the concept's 'matter', which he tells the reader 'is the *object*' (Ak. 9:91), i.e. a singular, spatiotemporally discrete magnitude.[89] However, the reader is also informed that the aspect of an empirical concept which is formed, or 'made', is its form, which is '*universality*' (Ak. 9:91). This then raises a puzzling question as to how exactly experience, which can be the source only of singular

[88] Cf. Ginsborg (2006), p.39; Anderson (2015), pp.336-43; Pippin (1982), pp. 94-114

[89] Cf. § 2.3 above.

representations' can serve as the basis for constructing the universal form of a concept.[90] In other words, this is the question as to how one can supposedly extrapolate from a finite inductive base a universally applicable rule.

Ginsborg's assertion is that, in this regard, Kant's tree example begs the question. For, as she writes, 'the example assumes that we are capable at the outset of recognizing what is presented to us as having leaves, branches, and a trunk, and this would seem to presuppose that we possess the concepts <*leaf*>, <*branch*> and <*trunk*>.'[91] In other words, her objection is that the leap from particular objects to universal concepts in Kant's example seems to be effected by his illicitly and ineliminably involving in the formation process the subject's apprehension of already acquired empirical concepts which, *qua* concepts, have a universal form. Thus Kant there claims that one gets to acquire the universal form of the concept <*tree*> from the particular objects given in experience (i.e. those particular spruce, willow and linden trees given in experience) by forging it out of the already universal forms of the concepts <*leaf*>, <*branch*> and <*trunk*>.

Another, related objection is that, in so far as this account of empirical concept formation would seem to depend on the judging subject already being in possession of other concepts, a regress would seem to loom. For one might well ask 'how does the judging subject come to acquire the concept <*leaf*> or <*branch*> or <*trunk*>?', to which Kant would presumably have to respond that there are some further empirical concepts which the judging subject is in possession of and which they are able to use in the formation of these. For example, the concept <*leaf*> it might be suggested is formed after the judging subject has an experience of multiple distinct objects each of which is thought under the concepts <*stem*> and <*deciduous*>. They would then supposedly abstract away all the differing features of these three objects and would be left with the concept <*stem-part which falls off*>, i.e. the concept <*leaf*>. But then the

[90] Ginsborg (2006) 'Thinking the Particular as Contained under the Universal' from (ed. Kukla) *Aesthetics and Cognition in Kant's Critical Philosophy*, p.39

[91] Ibid., p.39

question can simply be posed again at this level: 'how does the judging subject acquire the concept <*stem*> or <*deciduous*>?' and so on ad infinitum.

Given the perceived severity of these objections, Ginsborg straightforwardly asserts that Kant's example 'does not yield a satisfying account of how we arrive at empirical concepts'.[92] One must admit that these objections do appear to cut quite deep if indeed one hopes to find in Kant's tree example a thoroughgoing account of how the form of concepts can be influenced by intuitive content. Given the heterogeneity of intuitions and concepts how can Kant possibly hope to bridge the gap in such a way as to allow for the possibility that the deliverances of experience are capable of serving as the raw materials for the construction of a concept?

However, it is not entirely clear that it is fair to direct these objections at Kant's tree example. For one can distinguish between (i) the viability of Kant's account of how empirical concepts get started, i.e. how the most basic and elementary empirical concepts can be said to have been formed in light of intuitions given in experience but independently of prior familiarity with other empirical concepts, and (ii) the viability of the tree example as an account of how one's already established repertoire of empirical concepts can be extended by experience. Whilst Ginsborg's objections are, I think, effective at showing the former to be inadequate, it does not appear so obvious to me that they are at all successful at showing the latter to be so. Furthermore, it seems readily apparent from Kant's remarks in the *Jäsche Logic* that he intends the tree example to be understood as solely an account of how we augment our conceptual repertoire, not an account of how the most primitive empirical concepts come to be forged.

Additionally, I think Kant's tree example can provide the basis for what we are here seeking, i.e. an account of the way in which the containment and exclusion relations between genus and species concepts can be said to be determined a posteriori by experience. As I will outline below, the tree example provides a model for explaining the way in which novel compound concepts could be constructed by conjoining collections of more basic concepts with a differentia concept, all of which have been presented

[92] Ibid., p.39

together in multiple different objects encountered in experience. In this way, containment and exclusion relations between concepts could be said to be established by the construction of new compound concepts, a process governed by the sheer givenness in experience of certain combinations of concepts in empirical objects.

For these reasons, I am going to here set aside the tricky questions surrounding Ginsborg's generality and regress objections. I have no doubt that a thoroughgoing defence of Kant's model of empirical concepts would need to engage with her concerns about the primitive instances, however, it is not here my prerogative to provide any such a defence. Rather, my objective in this section is to get clear as to how exactly Kant thinks that which is given in experience can determine logical relations of containment and exclusion between genus and species concepts, and for this purpose Kant's tree example is more than fit for purpose.

One might initially balk at reading Kant's tree example as an illustration of how a species concept is born of a genus concept. For in this example Kant presents not a single genus concept giving birth to a slightly more refined species concept, but three separate concepts (i.e <*leaf*>, <*branch*> and <*trunk*>), none of which appears to be a genus concept, being combined to form a new compound concept (i.e. <*tree*>). In other words, given that trees are not a species of the genera leaf, branch or trunk, it surely cannot be the case that Kant is there presenting us with an example of how logical containment and exclusion relations between concepts come to be established.

In contradistinction to this case, one might expect that an account of how such logical relations come to be established a posteriori would need to be one in which it was explained how experience was responsible for generatingthe concept <*tree*> out of some experience involving the concept <*plant*>. This, however, would appear to be problematic. For it is hard to imagine in any such a case what additional content the concept <*tree*> could possess which the concept <*plant*> is lacking. One might suspect that Kant could simply hold that the concept <*tree*> is merely a compound of the concept <*plant*> with some other concept (e.g. <*trunk*>) such that <*tree*> = <<*plant*> + <*trunk*>>. However, this would mean that the concept <*tree*> would contain not only the genus concept <*plant*> and all those genus concepts which

feature above it in the hierarchy, but also the additional concept <*trunk*>. What's more, this differentia concept <*trunk*> would appear to be hidden from plain sight in any potential Porphyrian mapping of the conceptual containment relations and the same would seemingly be true of every genus concept above <*plant*> which would also presumably be distinguished from those above it by the addition of a hidden differentia concept. This then opens up the possibility of concepts containing concepts which do not appear in the porphyrian diagram.

The solution to this problem, I would suggest, is that one must understand that all genus and species concepts are for Kant, in a Leibnizian mould, conjunctions of more basic concepts. That is to say that every concept which features in a relation of containment and exclusion is in fact a compound concept. For example, on this picture the concept <*feline*> might comprise a conjunction of the concepts <*four-legged*>, <*hairy*>, <*sharp-toothed*>, <*nose*> such that whenever some object is thought under all four of these concepts simultaneously, one who has acquired the umbrella concept <*feline*> can think that object under it. Similarly, the concept <*cat*> would also count as a compound concept, one which includes all the conjuncts of the concept <*feline*> but with the addition of the differentia concept <*friendly*>. In this sense, the concept <*cat*> can quite literally be said to contain (i.e. be partially identical with) the concept <*feline*> for it contains all the basic concepts which comprise the latter. Likewise, the concept <*lynx*> will also be said to have within its component concepts all four of the conjuncts of the concept <*feline*> but with the addition of the alternative differentia concept <*hostile*>. The concept <*cat*> can then be said to exclude the concept <*lynx*> and vice versa on the basis that they both contain concepts which the other does not and so cannot stand in containment relations to one another. The relations between these conjunctive concepts could then be mapped in the following way:

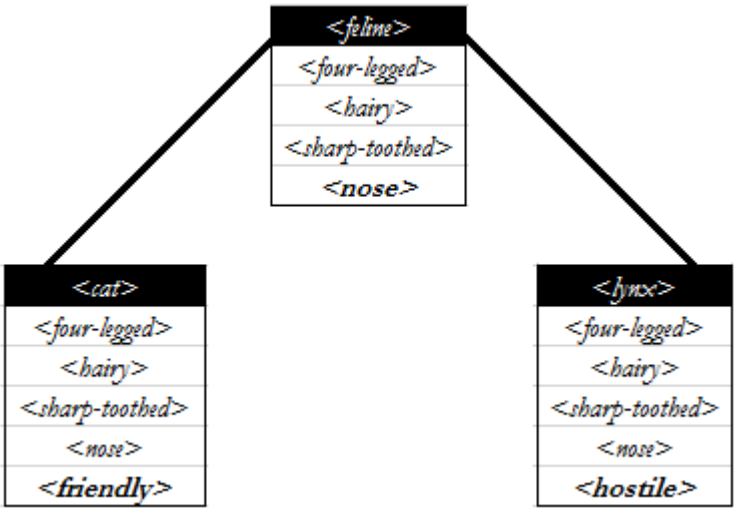

Fig. 7 – Porphyrian Tree comprising compound concepts 1

With this model of containment and exclusion relations in mind, it is easier to see the way in which Kant's tree example can explain how experiences of empirical objects can establish such relations. In Kant's case, the judging subject is confronted with three objects: a linden, a willow and a spruce, each of which instantiates the three concepts <*leaf*>, <*branch*> and <*trunk*>. Now if, for example, one is to assume, as Anderson (2015) does,[93] that here <*leaf*> and <*branch*> in fact together form the umbrella genus concept <*plant*>, it is possible to see the way in which the concept <*trunk*> can function as the differential addition required to form the new umbrella species concept <*tree*>. On this picture, the possibility of forming the concept <*tree*> out of the concepts <*plant*> (i.e. <<*leaf*> + <*branch*>>) and <*trunk*> is contingent upon those concepts being brought together in experiences of multiple different singular objects given in intuition. Thus, the judging subject's a posteriori acquisition of the concept <*tree*> is closely related to the fact that that concept is itself a mere conjunction of others and thus can be said to be partially identical with each of them, i.e. to "contain" them.

What's more, textual support for this interpretation can be found in the Introduction to the *Jäsche Logic*. In section VIII, Kant sets about distinguishing between two different acts of the understanding: what he calls (i) making a distinct concept and (ii) making a concept distinct. Whilst the

[93] Anderson, Lanier (2015) *The Poverty of Conceptual Truth*, p.359

latter procedure appears to be much like the standard process of conceptual analysis espoused by Leibniz and Wolff in which one aims to discern 'what [lies] in the given concept already' (Ak. 9:63), the former would seem to be rather more synthetic. Kant writes that 'when I make a distinct concept, I begin with the parts and proceed from these toward the whole' (Ak. 9:63). Furthermore, he elaborates by asserting that this '*synthetic* procedure'[94] enables one to 'extend [one's] concept as to *content* through what is added as a mark beyond the concept in […] intuition' (Ak. 9:63).[95] In other words, when one is presented in experience with an object which falls under a set of marks which characterise a particular concept but also some additional differentia concept (i.e. that which is added as a mark beyond the concept in intuition), one is able to extend the content of that original concept in order to make a new distinct compound concept.[96]

Notably, this picture allows for the possibility that the concepts which any judging subject comes to form in light of experience are essentially corrigible. For example, were the judging subject in question to be in possession of the concepts of <*cat*>, <*feline*> and <*lynx*> outlined above, they may be liable to

[94] My emphasis.

[95] My emphasis.

[96] One objection which a sceptical observer might have at this juncture is that it may seem that reading species and genus concepts as complex conjunctive compounds of more basic concepts in this way undermines the Wolffian-style model of containment which it was argued in chapter 1 provides the basis for Kant's model of conceptual exclusion. For on this picture there is no reason why concepts like <*friendly*> which features here as a conjunct in the compound concept <*cat*> could not also feature in other entirely unrelated compound concepts like <*ally*>. In fact concepts like <*friendly*> could stand in all number of relations of containment and exclusion to other concepts seemingly in opposition to the Wolffian notion that each concept stands in just one interconnected set of such relations. However, in response to this objection all that one need urge is a similar point to that put forward in section 2.2 above. Kant needn't cleave to Wolff's notion that all concepts stand to one another in one interconnected whole of containment and exclusion relations in order to help himself to the Wolffian model of conceptual exclusion. All he need to commit to is the notion that every conceptual containment relation is paired with a dichotomous containment relation characterised as involving the addition of a distinct differentia concept to the same base concept such that any empirical object can only ever fall under one of the two but never both. In fact, given Kant's remarks in the Regulative Employment warning against attempting to construct an intellectual system of the world, would seem to speak in favour of reading his account of genus and species concepts as unsystematic in the way that I here suggest.

encounter in experience various empirical objects which lead them to make various adjustments to those concepts. Consider a case in which the judging subject whilst on safari encounters an incredible black and orange striped beast which is brought together in intuition not only under the concepts <*orange*>, <*black*> and <*striped*> but also under the concepts <*four-legged*>, <*hairy*>, <*sharp-toothed*>, <*nose*> and <*hostile*>. In these circumstances, the judging subject in possession of aforementioned form of the concept <*lynx*> is liable to proclaim "Look! A great stripy lynx!" To which, of course, they are likely to be swiftly corrected by their fellow expeditioners that the creature in question is a tiger, not a lynx, and that tigers are a kind of panther. If the judging subject's companions were feeling in a particularly pedagogical spirit, they may even explain further that tigers are distinguished as panthers from felines on the basis of the fact that they are significantly larger in size. In this instance, the judging subject will be forced to adjust their set of concepts accordingly. Whilst all felines, lynxes and cats, would need to be now brought under the concept <*small*> as well as the concepts <*four-legged*>, <*hairy*>, <*sharp-toothed*> and <*nose*>, all pantherines would need to fall under the concept <*big*> in addition to those others. In this way, through gradual adjustment of the hierarchy in light of experience, the judging subject is able to construct over time a complex web of interrelated concepts akin to the following:

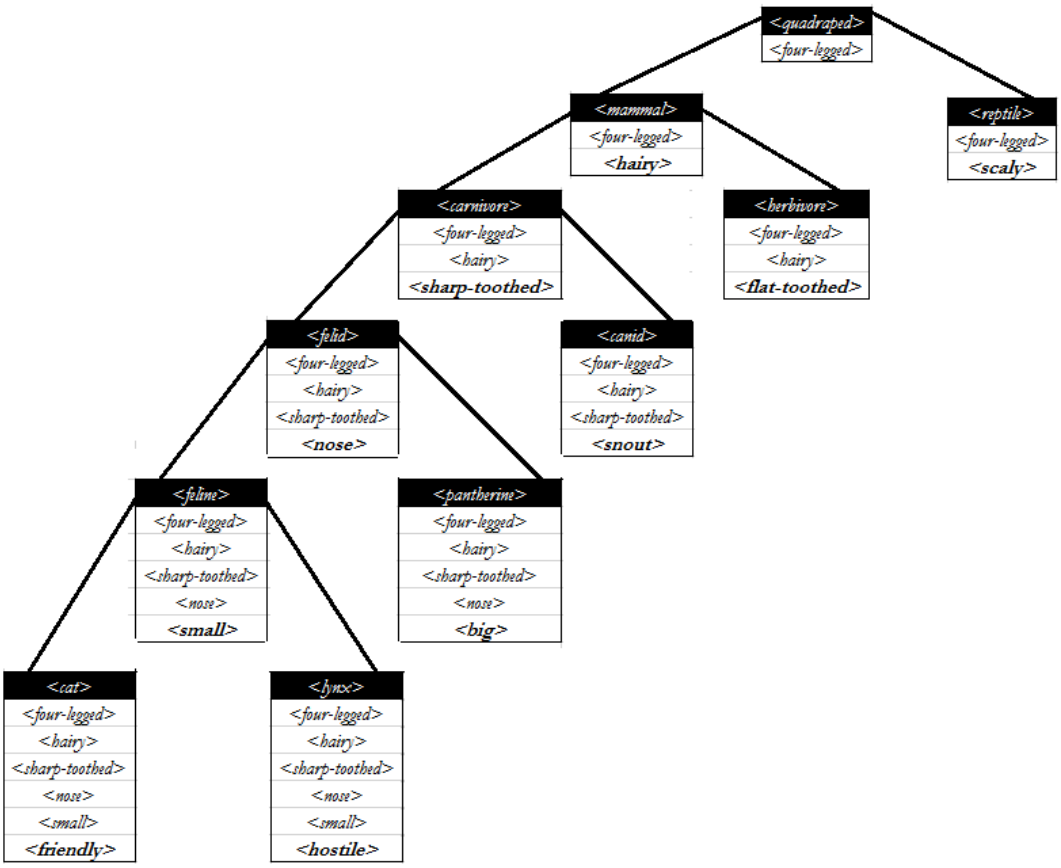

Fig. 8 –Porphyrian Tree comprising compound concepts 2 [97]

Crucially, however, on this picture, empirical concepts and their relations to one another are always constrained by what is given in experience; a Kantian empirical concept cannot be formed purely by stipulation. For example, one could not simply construct a new species concept <*gat*> by combining by pure stipulation the genus concept <*cat*> with the differentia concept <*gold*>. Rather, the formation of any empirical concept is contingent upon a pool of *actually given* objects which instantiate a novel combination of concepts. Thus, unlike in the case of the stipulative non-concept <*gat*>, it is possible to form the *real* species concept <*tabby*> from the genus concept <*cat*> and the differentia concept <*striped*> given that it is a *real* possibility that one can come to have experiences of multiple objects which instantiate both these concepts. It is in this way that Kant is able to ensure that the intensional relations of

[97] I would ask the reader to kindly forgive any taxonomic faux pas that I may have committed. I have little doubt that the genus/species classifications outlined above would be liable to make even the most wet-eared natural historian weep. I can only hope that my deficiencies in this capacity are at the very least not directly responsible for more explicitly philosophical failings.

containment and exclusion between empirical concepts are not merely stipulative or nominalistic but reflect objective characteristics of the empirical world.

This qualification has important consequences for the question that this chapter set out to answer. A judgement's subject concept containing or excluding its predicate concept is not by itself sufficient to guarantee that a judgement is analytic. It is also necessary for the judgement's constituent concepts to be objectively real, i.e. for them to be empirical. For in the case of a stipulative definitional judgement like [all gats are gold] which involves a 'concept that we have ourselves invented' (A639 / B667) there is no guarantee that what it asserts reflects any aspect of objective, empirical reality. Consequently, any such a judgement cannot possibly hold as 'absolutely necessary' (Axv.) and thus cannot be known to be true a priori. However, in the case of a judgement which is comprised of real, empirical concepts which stand in containment or exclusion relations to one another, the opposite is the case. Given that such concepts are objectively real, it is possible for one to know a priori not only that they stand in intensional relations of containment and exclusion to one another, but consequently also that the judgement in question asserts a universal truth about objective, empirical reality.

In this way, a Kantian analytic judgement like [all cats are felines] is not merely a 'conceptual truth' which fails to 'convey any factual information';[98] it is a truth which holds of objective, empirical reality as such, and one which can be known to hold a priori in virtue of the relation of containment in which the concept <*cat*> stands to the concept <*feline*>, even if in light of some great tragedy all the cats and felines were rendered extinct. In contrast, a pseudo-analytic judgement like [all gats are gold] would not even count as a conceptual or non-factual truth. Rather, these would seem to be, at least in part, 'thoughts without content' which Kant is very clear are 'empty' and thus do not really amount to anything like thought at all (A51 / B75). Thus on this picture, contrary to the conventional view of

[98] Hintikka, Jaakko (1965) ' Are Logical Truths Analytic?', p.178

analyticity held by most analytic philosophers today,[99] a judgement like [all gats are gold] is for Kant not analytic.[100]

In this way, I would urge, the intensional, logical relations which hold between empirical concepts can be seen to be constrained by that which is actual and given in intuition and thus to possess objective reality. It is this fact which for Kant *makes it the case* that what an analytic judgement asserts is true or false whilst it is the intensional relations which provide the a priori guarantee that the assertion in question is true or false.

3.3 – A REPRISE OF THE SUBJECTIVITY OBJECTION

In summary of the preceding, one could say that according to Kant a judgement is analytic just in case its subject contains or excludes its predicate concept, where said relationships of containment and exclusion are established by means of experiences in which base compound concepts are brought together in multiple intuitively given empirical objects with various differentia concepts to form partially identical genus and species concepts. Furthermore, given that once the judging subject has acquired such concepts, the relations of containment and exclusion between them are in principle knowable a priori, meaning that the truth of any analytic judgements is knowable by reflection on its constituent concepts alone. For necessarily any object which falls under the subject concept will also fall under the predicate concept. However, the fact that what is asserted by the judgement in question is either true or false is not determined by these containment / exclusion relations alone. Rather, it is the objective reality of these relations which determines that the judgement in question is true. For these reasons, Kant's notion of

[99] Whilst views on what exactly analyticity is very greatly amongst analytic philosophers, the standard Quinean definition holds that a proposition or sentence is analytic just in case it is 'such a statement is that it can be turned into logical truth by putting synonyms for synonyms' (Quine (1951), p.23). On this picture, it follows that any posited synonymy can serve as the basis for analyticity, even when that postulate is entirely arbitrary and has no basis in observed experience. For example, one can stipulate that the word 'gat' is synonymous with the descriptive phrase 'gold cat' and it will supposedly follow that the sentence 'all gats are gold' is analytic. What I am suggesting here is that Kant would not allow for any such an equivalent judgement to count as analytic.

[100] It should be added that neither is it synthetic for Kant. It is an empty, abortive judgement which is incapable of bearing an epistemic predicate like 'analytic' or 'synthetic'.

analyticity can be understood to be – in the contemporary sense – epistemological rather than metaphysical.

At this point, it would appear that a fairly full-blooded account of analytic judgements can be extracted from Kant's meagre remarks on the subject in the critical-era texts. One which in various ways is surprisingly alien to those models of analyticity more familiar to post-Fregean and post-Quinean analytic philosophers. However, at this juncture, the sceptically minded observer is liable to object that the aforementioned account of the formation of genus and species concepts undermines the argument outlined in chapter 1 for thinking that a new unified reading of Kant's quadripartite characterisation of analyticity based on the containment characterisation is able to overcome subjectivity objections. On that picture, it was argued that, in so far as containment and exclusion relations between concepts are objective and fixed, the question as to whether any given judgement is either analytic or synthetic will not vary from subject to subject. The fact, for example, that [all cats are felines] is analytic holds for all judging subjects in virtue of the fact that the relation of containment between the concepts <*cat*> and <*feline*> is not idiosyncratic and subjective but logical and fixed.

However, according to the account of genus / species concept formation outlined above, this would not seem to hold. For, in fact, it would seem that whether or not a particular judgement is analytic or synthetic would depend upon whether or not the judging subject in question had formed the appropriate compound concept or not. For example, suppose that some judging subject s_1 has already formed the compound concepts <*cat*> correctly but some other judging subject s_2 has not. In this instance, both s_1 and s_2 could formulate similar judgements, one of which involved the correct formulation of the compound concept <*cat*> and one of which involved just the incorrect formulation. That is to say that s_1, correctly believing the concept <*cat*> to be comprised of the constituent concepts <*four-legged*>, <*hairy*>, <*sharp-toothed*>, <*nose*>, <*small*> and <*friendly*> whilst s_2 incorrectly believes it to be comprised of the concepts <*four-legged*>, <*hairy*> and <*annoying*>. In this case, it would seem, a judgement like [all cats are sharp-toothed] would be analytic for s_1 but synthetic for s_2, whilst the judgement [all cats are annoying] would be analytic for s_2 and synthetic for s_1.

If this were the case, the above account of the formation of genus and species concepts and the associated notion of containment would indeed appear to fall prey to the subjectivity objection. Consequently, a large part of the perceived advantage of reading Kant's notion of conceptual containment on the model of Leibnizian / Wolffian logical relations between concepts would appear to be lost. Intensional relations between concepts would appear to be far too heavily influenced by the vagaries of experience on a subject by subject basis to serve as the foundation of a principled and objective division of the set of all judgements into those which are analytic and those which are synthetic. Thus it would seem as though the Maaß-style objection against containment which we set out to undercut would seem to have demonstrated its potency.

However, I would urge that any such an objection to the above sketch fails to countenance the crucial difference between what one in fact judges and how one thinks of themselves as having judged. For Kant, a judgement is not merely a subjective state of mind in which two idiosyncratic subjective concepts are conjoined; it is a logical entity, the 'matter' (A266 / B322) of which constitutes concepts possessing 'common validity' (Ak. 24:908). Of course, however, one can be mistaken in thinking that they are in possession of a concept which they are not. One can, like s_2, judge that [all mammals are annoying], mistakenly thinking that they are judging that [all cats are annoying], merely as a result of erroneously assuming that one is in possession of the species concept <*cat*> and that concept comprises the basic concepts <*four-legged*>, <*hairy*> and <*annoying*>. But the status of that judgement as [all mammals are annoying] rather than [all cats are annoying], and furthermore its status as synthetic rather than analytic is not determined by mental fiat, but by the 'logical matter' of the judgement in question and the objective relations in which those concepts stand to one another.

Thus s_2 might be under the impression that they have judged analytically in asserting that all cats are annoying. But in actual fact, they simply do not possess the concept <*cat*> and so they merely think that what they have asserted holds as a priori necessary when it does not. Similarly, in so far as they do not possess the concept <*cat*>, they are unable to appreciate the a priori necessity of the judgement [all cats are

sharp-toothed]. But this is not because they have a different form of the concept <*cat*>; it is because they do not possess the concept <*cat*> at all.

3.4 – CONCLUSION

In conclusion, I have argued above that there are good reasons for favouring a unified reading of Kant's quadripartite characterisation of analytic judgements in which characterisation (A) – the containment characterisation – is taken as explanatorily primary. Furthermore, I have followed de Jong (1995) and Anderson (2015) in arguing that this notion of conceptual containment can be shown to be a robust logical notion inherited by Kant from his rationalist forebears Leibniz and Wolff. This qualification was shown to be significant in so far as it enabled any such a unified reading built around (A) to respond effectively to both Quinean-style deficiency and Maaß-style subjectivity objections. Furthermore, I argued that reading a broadly Leibnizian / Wolffian construal of intensional relations between concepts into the *CPR* was not only interpretatively viable but also positively advantageous. The viability of such a reading I demonstrated by showing the ways in which Kantian analytic judgements differ in important ways from their Leibnizian and Wolffian antecedents, allowing for the possibility of intensionally indeterminate relations between concepts and a new extensional interpretation of logical quantities. The advantages of this reading, I suggested, were that it allowed us to make greater sense of the rhetorical significance of Kant's analytic / synthetic distinction. In negatively contrasting analytic with synthetic judgements, Kant was able to expose a crucial weakness in the Leibnizian / Wolffian theory of the proposition, i.e. its inability to effectively handle existential propositions. Finally, I warned against construing Kantian analyticity as providing an account of truth in virtue of concepts. Instead, I suggested that Kantian analyticity should be understood as broadly epistemological in so far as containment and exclusion relations between concepts are responsible for the a priori status of analytic judgements, not for their truth. The truth of these judgements, I then urged, can be seen to follow from the objective reality of the concepts themselves. One can know a priori that all cats are felines, on this picture, in virtue of the fact that the concept <*cat*> contains the concept <*feline*> but the fact that all cats are felines is a fact about objects given in intuition.

BIBLIOGRAPHY

Abela, Paul (2002) *Kant's Empirical Realism* (Oxford : Oxford University Press)

Adams, Robert (1994) *Leibniz: Determinist, Theist, Idealist* (Oxford: Oxford University Press)

Allais, Lucy (2009) 'Kant, Non-Conceptual Content and the Representation of Space' in *Journal of the History of Philosophy*, Vol.47 (3)

Allison, Henry E. (2003) *Kant's Transcendental Idealism* (2nd edition) (New Haven: Yale University Press)

Allison, Henry E. (1973) *The Kant-Eberhard Controversy* (London: John Hopkins University Press)

Anderson, R. Lanier (2005) 'The Wolffian Paradigm and its Discontents: Kant's Containment Definition of Analyticity in Historical Context' in *Archiv für Geschichte der Philosophie*, Vol.87 (1)

Anderson, R. Lanier (2015) *The Poverty of Conceptual Truth* (New York: Oxford University Press)

Aquila, Richard (1974) 'Kant's Theory of Concepts' in Kant-Studien, Vol.65 (1-4)

Arnauld, Antoine & Nicole Pierre (1996) *Logic or the Art of Thinking* [1683] (trans. Buroker) (Cambridge : Cambridge University Press)

Ayer, A.J. (1952) *Language, Truth and Logic* [1946] (New York : Dover Publications)

Bassler, Bradley O. (1998) 'Leibniz on Intension, Extension, and the Representation of Syllogistic Inference' in *Synthese*, Vol.116 (2)

Beck, Lewis White (1955) 'Can Kant's Synthetic Judgements be made Analytic' in Kant-Studien, Vol. 47

Beck, Lewis White (1956) 'Kant's Theory of Definition' in *The Philosophical Review*, Vol.65 (2)

Bennett, Jonathan (1966) *Kant's Analytic* (Oxford: Oxford University Press)

Boghossian, Paul (1996) 'Analyticity Reconsidered' in *Noûs*, Vol.30 (3)

Boghossian, Paul (2003) 'Analyticity Revisited' in *Grazer Philosophische Studien*, Vol.66

Bolzano, Bernard (2014) *Theory of Science, Vol.1* [1837] (eds. Rusnock & George) (Oxford: Oxford University Press)

Brandt, Reinhard (1995) *The Table of Judgments: Critique of Pure Reason A67-76; B92-101* (Atascadero, CL : Ridgeview Publishing Company)

Carnap, Rudolf (1956) *Meaning and Necessity* (Chicago: Chicago University Press)

Carnap, Rudolf (2001) *The Logical Syntax of Language* [1937] (trans. Smeaton) (London : Routledge)

Coffa, Alberto (1991) *The Semantic Tradition from Kant to Carnap* (New York: Cambridge University Press)

Couturat, Louis (2013) [1903] *La Logique de Leibniz: D'Apres Des Documents Inedits* (Paris : Hachette)

de Jong, Willem (1995) 'Kant's Analytic Judgements and the Traditional Theory of Concepts' in Journal of the History of Philosophy, Vol.33 (4)

de Jong, Willem (1996) 'Gottlob Frege and the Analytic-Synthetic Distinction within the Framework of the Aristotelian Model of Science' in *Kant-Studien*, Vol.87 (3)

de Jong, Willem (2010) 'The Analytic-Synthetic Distinction and the Classical Model of Science: Kant, Bolzano and Frege' in *Synthese*, Vol.174 (2)

Frege, Gottlob (1980) *The Foundations of Arithmetic* [1884] (trans. Austin) (Evanston, Ill. : Northwestern University Press)

Gardner, Sebastian (1999) *Kant and the Critique of Pure Reason* (Oxford: Routledge)

Ginsborg, Hannah (2006) 'Thinking the Particular as Contained Under the Universal' from *Aesthetics and Cognition in Kant's Critical Philosophy* (ed. Kukla) (Cambridge : Cambridge University Press)

Guyer, Paul (1987) *Kant and the Claims of Knowledge* (Cambridge : Cambridge University Press)

Haack, Susan (1978) *Philosophy of Logics* (Cambridge : Cambridge University Press)

Hanna, Robert (1991) 'How Ideas Became Meanings: Locke and the Foundations of Semantic Theory' in *The Review of Metaphysics,* Vol.44 (4)

Hanna, Robert (2004) *Kant and the Foundations of Analytic Philosophy* (New York : Oxford University Press)

Hanna, Robert (2005) *Kant and Non-Conceptual Content* (ed. Heideman) (London : Routledge)

Hintikka, Jaakko (1965) 'Are Logical Truths Analytic?' in *The Philosophical Review*, Vol.74 (2)

Hintikka, Jaakko (1969) 'On Kant's Notion of Intuition (Anshauung)' from Penelhum & MacIntosh (trans.) *The First Critique: Reflections on Kant's Critique of Pure Reason* (Belmont, CL. : Wadsworth Publishing)

Hintikka, Jaakko (1972) 'Kantian Intuitions' in *Inquiry*, Vol.15 (1-4)

Ishiguro, Hidé (1990) *Leibniz's Philosophy of Logic and Language* [2nd revised edition] (Cambridge : Cambridge University Press)

Kant, Immanuel (2007) *Critique of Pure Reason* [1781] (trans. Kemp-Smith) (New York: Macmillan)

Kant, Immanuel (1955) *Kritik der Reinen Vernunft* [1781] (Hamburg: Felix Meiner)

Kant, Immanuel (1970) *Philosophical Correspondence: 1759-99* (trans. Zweig) (Chicago : University of Chicago Press)

Kant, Immanuel (1977) *Prolegomena to Any Future Metaphysic*s [1783] (trans. Ellington) (Indianapolis: Hackett)

Kant, Immanuel (1992) *Lectures on Logic* (trans. Young) (New York: Cambridge University Press)

Kant, Immanuel (1992) *Theoretical Philosophy 1750-1777* (trans. Walford & Meerbote) (New York: Cambridge University Press)

Kant, Immanuel (1996) *Religion and Rational Theology* [1786-1817] (trans. Wood & di Giovanni) (New York : Cambridge University Press)

Kant, Immanuel (1997) *Lectures on Metaphysics* [1760-1790] (trans. Ameriks & Naragon) (New York: Cambridge University Press)

Kant, Immanuel (2004) *Metaphysical Foundations of Natural Science* [1786] (trans. Friedman) (New York : Cambridge University Press)

Kant, Immanuel (2005) *Notes and Fragments* (trans. Bowman, Guyer & Rauscher) (Cambridge : Cambridge University Press)

Kneale, Martha & Kneale, William (1971) *The Development of Logic* [1962] (Oxford : Oxford University Press)

Kripke, Saul (2001) *Naming and Necessity* [1972] (Cambridge, MA. : Harvard University Press)

Leibniz, G.W. (1966) *Leibniz: Logical Papers* [1686] (trans. Parkinson) (Oxford: Oxford University Press)

Leibniz, G.W. (1961) *Opuscules et Fragments Inédits de Leibniz* (Hildesheim : Georg Olms Verlagsbuchhandlung)

Leibniz, G.W. (1989) *Philosophical Papers and Letters* (trans. Loemker) (Chicago: Chicago University Press) (abv. PP)

Leibniz, G.W. (1989) *Philosophical Essays [1675-1716]* (Indianapolis: Hackett) (abv. PE)

Lewis, C.I. (1918) *A Survey of Symbolic Logic* (Berkeley : University of California Press)

Leech, Jessica (2015) 'Kant's Material Condition of Real Possibility' from *The Actual and the Possible: Modality in Modern Philosophy* (ed. Sinclair) (forthcoming)

Look, Brandon C. (2016) 'Leibniz's Theories of Necessity' from *Logical Modalities from Kant to Carnap: The Story of Necessity* (eds. Cresswell, Mares & Rini) (Cambridge : Cambridge University Press)

Longuenesse, Beatrice (1998) *Kant and the Capacity to Judge* (Princeton, NJ. : Princeton University Press)

McDowell, John (1994) *Mind and World* (Cambridge, MA : Harvard University Press)

Newton, Alexandra (2010) 'Kant on Logical Form' (Doctoral Thesis)

Newton, Alexandra (2015) 'Kant on the Logical Origin of Concepts' in *European Journal of Philosophy*, Vol.23 (3)

Parkinson, G. H. R. (1965) *Logic and Reality in Leibniz's Metaphysics* (Oxford: Oxford University Press)

Pippin, Robert (1982) *Kant's Theory of Form: An Essay on the Critique of Pure Reason* (New Haven, CT. : Yale University Press)

Proops, Ian (2005) 'Kant's Conception of Analytic Judgement' in *Philosophical and Phenomenological Research*, Vol.70 (3)

Quine, Willard Van Orman (1961) [1953] *From a Logical Point of View* (Cambridge: Harvard University Press)

Sellars, Wilfrid (1997) *Empiricism and the Philosophy of Mind* [1956] (Cambridge, MA : Harvard University Press)

Stang, Nicholas F. (2016) *Kant's Modal Metaphysics* (Oxford : Oxford University Press)

Thompson, Manley (1972) 'Singular Terms and Intuitions in Kant's Epistemology' in The Review of Metaphysics, Vol.26 (2)

Van Cleve, James (1999) *Problems from Kant* (New York: Oxford University Press)

Watkins, Eric (ed.) (2009) *Kant's Critique of Pure Reason: Background Source Materials* (Cambridge : Cambridge University Press)

Williamson, Timothy (2007) *The Philosophy of Philosophy* (Padstow : Blackwell Publishing)

Wolff, Christian (1770) *Logic, or Rational Thoughts on the Powers of the Human Understanding with their Use and Application in the Knowledge and Search of Truth* [Deutsche Logik] (trans. unknown) (London: L. Hawes, W. Clarke, and R. Collins)