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Alberto Vanzo

Kant's *False Subtlety of the Four Syllogistic Figures* in Its Intellectual Context

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by Luca Gili and Marco Sgarbi (London: Bloomsbury)

Kant's only work in the field of formal logic (or, to use his terms, general pure logic¹) is the short essay *The False Subtlety of the Four Syllogistic Figures*. Kant completed it in 'few hours'² in 1762, shortly before completing three longer works, published in 1763 and 1764: *The Only Possible Argument in Support of a Demonstration of the Existence of God*, *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy*, and *Inquiry into the Distinctness of the Principles of Natural Theology and Morality*.³ These four works outline a coherent set of doctrines, several of which are discussed in more than one work⁴ and differ significantly from Kant's earlier and later views. In fact, two periods of silence separate the works of 1762–1764 from Kant's other major publications. Kant only published minor, occasional writings from 1757 to 1761 and from 1765 to 1766.⁵

Among Kant's works from the early 1760s, the *False Subtlety* has received the least attention from scholars. Most systematic studies focus on Kant's views on syllogistic reduction. Interpreters diverge widely on what patterns of inference Kant allows,⁶ what

1 Kant rarely uses the expression "formal logic" (A131/B170). However, he often stresses the formal character of general pure logic (e.g. in A55/B79, A59–60/B84–85). References to the *Critique of Pure Reason* appeal to the 1st- and 2nd-edition pagination (A and B). Otherwise, the pagination to which I refer in Kant's texts is from his *Gesammelte Schriften*, ed. Königlich Preußische (Deutsche) Akademie der Wissenschaften, Berlin 1900–. I use the following abbreviations: *Beweisgrund* = *Der einzig mögliche Beweisgrund zu einer Demonstration des Daseins Gottes*; *Deutl.* = *Untersuchung über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral*; *M. Herder* = *Metaphysik Herder*; *Größen* = *Versuch den Begriff der negativen Größen in die Weltweisheit einzuführen*; *Spitzf.* = *Die falsche Spitzfindigkeit der vier syllogistischen Figuren*. Translations are from *The Cambridge Edition of the Works of Immanuel Kant*, ed. Paul Guyer and Allen W. Wood, Cambridge 1992–. I have replaced American spelling with British spelling and "characteristic mark" with "mark" as a translation of "Merkmal".

2 *Spitzf.*, 2:57.

3 I have listed these works in the order of composition, that differs from the order of publication. It was established on the basis of philological criteria after several controversies. See Mariano Campo, *La genesi del criticismo kantiano*, Varese 1953, 249–251.

4 For instance, the theory of formal and material principles of truth outlined in *Deutl.*, 2:293–296 expands on ideas sketched in *Spitzf.*, 2:60–61. The distinction between logical and real opposition is first introduced in *Beweisgrund*, 2:85–87 and then explained in *Größen*. The mistake of starting philosophical inquiries with definitions is criticized first in *Beweisgrund*, 2:66 and then in *Deutl.*, 2:281–282, 283, 284, 285, 288–289, 292–293.

5 They are the announcement of his lectures on physical geography (1757); *New Doctrine of Motion and Rest* (1758); *An Attempt at Some Reflections on Optimism* (1759); *Thoughts on the Occasion of Mr. Johann Friedrich von Funk's Untimely Death* (1760); and the announcement of Kant's lectures for the winter semester 1765–1766.

6 On whether Kant admits contraposition and obversion, see Kirk D. Wilson, 'The Mistaken Simplicity

reduction procedures he contemplates,⁷ and whether he intends them to apply to all valid forms of the second, third, and fourth figure.⁸ The few historical studies mostly focus on the relation of Kant's claims on syllogism with the views that he developed in the Critical period.⁹ Little has been written on how the *False Subtlety* relates to the doctrines outlined in Kant's other works from 1762–1764 and to the views of Kant's contemporaries and immediate predecessors. It is especially unclear who Kant's polemical targets were and to what extent Kant's polemical aims shaped his views on syllogism. In the *False Subtlety*, Kant claims that second-, third-, and fourth-figure syllogisms are valid only insofar as they can be reduced to the first figure and he denies that logicians should dwell on the doctrine of modes and figures. By putting forward these views, does Kant intend to reject 'Leibniz's syllogistic logic', as Silvestro Marcucci states,¹⁰ or is he 'undoubtedly' using Leibniz as his source, as Adolfo León Gómez claims?¹¹ Does Kant move 'a small step' away from Christian Wolff's position, as Nicholas Rescher holds,¹² or does he reject it altogether, as Michael Wolff suggests?¹³

This chapter discusses how Kant's views on the foundations of syllogistic inference relate to their immediate intellectual context – the views of eighteenth-century German authors writing on syllogism – and to the conception of metaphysics that Kant develops in 1762–1764. We will see that Kant's positions are, on the whole, rather original, even

of Kant's Enthymematic Treatment of the Second and Third Figures', *Kant-Studien*, 66 (1975), 404–417, 413; Mirella Capozzi, 'Osservazioni sulla riduzione delle figure sillogistiche in Kant', *Annali della Facoltà di Lettere e Filosofia dell'Università di Siena*, 1 (1980), 79–98, 88–91; Theodor Ebert, 'Michael Wolff über Syllogismen bei Aristoteles und Vernunftschlüsse bei Kant', *Journal for General Philosophy of Science*, 40 (2009), 357–372, 367–368. On whether Kant admits the transposition of premises, see Capozzi, 'Osservazioni sulla riduzione delle figure sillogistiche in Kant', 87, 89; Lorenzo Pozzi, *Da Ramus a Kant: Il dibattito sulla sillogistica*, Milan 1981, 98; Johan Arnt Myrstad, 'Kant's Treatment of the Bocardo and Barocco Syllogisms', in Valerio Rohden et al. (ed.), *Recht und Frieden in der Philosophie Kants: Akten des X. Internationalen Kant-Kongresses. 4.–9. Sept. 2005 in São Paulo*, Berlin 2008, vol. 5, 163–174, 164n3.

7 See Capozzi's and Myrstad's criticisms of Wilson and the debate between Theodor Ebert and Michael Wolff, respectively in Capozzi, 'Osservazioni sulla riduzione delle figure sillogistiche in Kant'; Myrstad, 'Kant's Treatment of the Bocardo and Barocco Syllogisms'; Ebert, 'Michael Wolff über Syllogismen bei Aristoteles und Vernunftschlüsse bei Kant'; Michael Wolff, 'Vollkommene Syllogismen und reine Vernunftschlüsse: Aristoteles und Kant', *Journal for General Philosophy of Science*, 40 (2009), 341–355; Michael Wolff, 'Vollkommene Syllogismen und reine Vernunftschlüsse: Aristoteles und Kant: Eine Stellungnahme zu Theodor Eberts Gegeneinwänden. Teil 2', *Journal for General Philosophy of Science*, 41 (2010), 359–371; Theodor Ebert, 'Michael Wolff über Kant als Logiker: Eine Stellungnahme zu Wolffs Metakritik', *Journal for General Philosophy of Science*, 41 (2010), 373–382.

8 *Spitzf.*, 2:58 might suggest that this is the case. Pozzi (*Da Ramus a Kant*, 100) and Myrstad ('Kant's Treatment of the Bocardo and Barocco Syllogisms', 172) deny it.

9 See esp. Wolfgang Malzkorn, 'Kants Kritik an der traditionellen Syllogistik', *History and Philosophy of Logic*, 16 (1995), 75–88; Marco Sgarbi, *Logica e metafisica nel Kant precritico: L'ambiente intellettuale di Königsberg e la formazione della filosofia kantiana*, Frankfurt a. M. 2010, 185–218.

10 Silvestro Marcucci, 'Introduzione', in Immanuel Kant, *La falsa sottigliezza delle quattro figure sillogistiche*, ed. Silvestro Marcucci, Pisa 2001, 9–18, 17, see 16.

11 Adolfo León Gómez, 'La silogística en Leibniz y Kant, y su parentesco', *Ideas y Valores*, 92–93 (1993), 41–46, 43.

12 Nicholas Rescher, *Galen and the Syllogism: An Examination of the Thesis That Galen Originated the Fourth Figure of the Syllogism in the Light of New Data from Arabic Sources*, Pittsburgh (Penn.) 1966, 37.

13 Wolff, 'Vollkommene Syllogismen und reine Vernunftschlüsse', 354–355.

though they lack the marked independence from the intellectual context that one can find in Kant's Critical works.¹⁴ Despite Kant's polemical tone, his views on syllogism are not mainly motivated by polemical purposes. Instead, Kant's views on the foundations of syllogism bear an interesting relation with his views on metaphysics, as they reflect the role that Kant assigns to syllogism in the process of metaphysical inquiry. This is in keeping with Kant's later works, where several aspects of his formal logic are influenced by transcendental logic.

I will focus on the relation of the *False Subtlety* with the views of Christian Wolff and some of his German successors. However, I do not intend to suggest that Kant was only influenced by these authors.¹⁵ I will not attempt to identify all influences on Kant's conception of syllogism, nor will I survey all German writings on syllogism of the period "from Wolff to Kant". I will only chart a representative sample of positions. This is sufficient to shed light on the degree of originality of the *False Subtlety*, to assess competing claims on the putative influences of Leibniz and Wolff on Kant, and to give the reader a sense of what questions were discussed, what the main points of disagreement were, and on which issues views were so fragmented that advancing a new view was itself a conventional move. Having outlined the positions of Kant's immediate predecessors (§ 1), I will illustrate Kant's views on the foundations of syllogisms and on the status of the second, third, and fourth figure (§ 2). I will then turn to their relation with the views of Kant's immediate predecessors (§ 3.1) and with Kant's own views on the foundation of metaphysics (§ 3.2). I will only discuss categorical syllogisms, as opposed to hypothetical and disjunctive syllogisms, because they are the only type of syllogism that the *False Subtlety* takes into account.

1 Kant's Immediate Predecessors on Syllogism

Kant's immediate predecessors generally agreed that, out of the 64 possible syllogistic moods and 256 syllogistic forms, 10 moods and 19 forms are valid.¹⁶ They also agreed

14 This is in line with Giorgio Tonelli's overall assessment of Kant's stance between 1745 and 1768. See his *Elementi metodologici e metafisici in Kant dal 1745 al 1768: Saggio di sociologia della conoscenza*, Turin 1959, 209. This is one of the most detailed studies of the relation of Kant's views with those of his peers. Tonelli's discussion of the *False Subtlety* (204–208) is unusually cursory.

15 For a broader discussion of the influences on the *False Subtlety*, that complements this chapter, see Sgarbi, *Logica e metafisica nel Kant precritico*, 185–218.

16 See e.g. Joachim Georg Darjes, *Introductio in artem inveniendi seu logicam theoretico-practicam*, Jena 1742, Analytica § 257. Categorical syllogisms are composed of three propositions, each of which can be universal affirmative (**A**), universal negative (**E**), particular affirmative (**I**) or particular negative (**O**), for a total of 64 possible combinations (**AAA**, **AAE**, **AEE**, ... **OOO**). Each combination is called a *mood*. Besides the form of the propositions that compose it, syllogisms are identified by the position of the middle term (which is the term that appears in the premises, but not in the conclusion). For instance, the middle term of a syllogism of mood **EAE** can be the subject of the major premise and the predicate of the minor premise (no mammals are plants; all humans are mammals; no humans are plants). It can also be the predicate of the minor and major premise (no humans are plants; all roses are plants; no roses are humans). The position of the middle term determines the *figure* of the syllogism. In the first figure, the middle term is the subject of the major premise and the predicate of the minor premise. In the second figure, the middle term is the predicate of both premises. In the third figure, the middle term is the subject of both premises. In the fourth figure, the middle term is the predicate of the major premise and the subject of the minor premise. The *form* of a syllogism (**EAE-1**, **EAE-2**, etc.) is determined by its mood and figure. Unlike current-

that all valid syllogisms in the second, third, and fourth figure can be reduced to the first figure.¹⁷ However, they disagreed on two questions: on what grounds we should accept those moods and forms as valid and whether second-, third-, and fourth-figure syllogisms are useful and should be studied. Kant's answers to these questions are just two among a varied array of views that were upheld by his predecessors and contemporaries.

1.1 *The Foundations of Syllogistic Inference*

Kant's immediate predecessors resorted to two methods to establish the validity of the 19 syllogistic forms. They are the method of principles and the reductive method.¹⁸ The method of principles amounts to formulating a series of rules to which all valid syllogisms must conform and excluding the forms which violate them, until one is left with the 19 valid forms. For instance, **EAA** and **EAI** violate the rule that, if one of the premises is negative, the conclusion must be negative. The reductive method amounts to establishing the validity of a privileged class of syllogisms (typically, those of the first figure) and reducing all other syllogisms to them. Kant will do this by arguing that their conclusions can be inferred from the premises by means of a syllogism of the privileged class, in combination with non-syllogistic inferences.¹⁹

Martin Knutzen, a rather independent Wolffian²⁰ who was Kant's university teacher, preferred the method of principles.²¹ He held that prior attempts to employ the reductive method failed:

Some learned men tried, with little success, to bring the entire doctrine of syllogisms under a single formula and a very general rule. Those who expressed expressed the foundation of affirmative and negative syllogisms with two very general rules [as Kant would do in the

day authors, Kant and his predecessors accepted the inference of **I**- and **O**-sentences from **A**- and **E**-sentences by subalternation. If this inference is rejected, the valid forms will be 15, not 19. See Irwing M. Copi et al., *Introduction to Logic*, 14th ed., Harlow (United Kingdom) 2014, 244.

- 17 See e.g. Darjes, *Introductio in artem inveniendi*, Analytica §§ 274–275; Christian August Crusius, *Weg zur Gewißheit und Zuverlässigkeit der menschlichen Erkenntniß*, Leipzig 1747, repr. 1965, §§ 333–335; Hermann Samuel Reimarus, *Die Vernunftlehre, als eine Anweisung zum richtigen Gebrauche der Vernunft in der Erkenntniß der Wahrheit*, Hamburg 1756, §§ 142, 148.
- 18 Paul Thom mentions a third method, the method of counterexamples. As far as I am aware, Kant and his immediate predecessors did not rely on it. See Paul Thom, 'Syllogismus; Syllogistik', in Joachim Ritter et al. (eds.), *Historisches Wörterbuch der Philosophie*, Basel 1971–2007, vol. 10, 687–707, 690.
- 19 Non-syllogistic inferences may be accepted as valid independently from syllogisms (*Spitzf.*, 2:50). Alternatively, they may be regarded as enthymematic hypothetical syllogisms which can be reduced to syllogisms of the privileged class (Christian Wolff, *Philosophia rationalis sive Logica*, 3rd revised ed., Frankfurt a.M. 1740, repr. with notes and an index by Jean École in Christian Wolff, *Gesammelte Werke*, Olms 1962–, sect. 2, vol. 1, §§ 413, 415, 460).
- 20 Several passages of his logic manual stress the importance of sensibility as the 'basis and principle of all our cognitions' (Martin Knutzen, *Elementa philosophiae rationalis seu logicae*, Königsberg 1747, repr. 1991, § 27; see §§ 64, 289n). They recall passages by anti-Wolffians like Crusius more than Wolff's works. See e.g. Christian August Crusius, *Entwurf der nothwendigen Vernunft-Wahrheiten, wiefern sie den zufälligen entgegen gesetzt werden*, Leipzig 1745, repr. 1964, §§ 45, 56; Crusius, *Weg zur Gewißheit*, § 53. Knutzen's preference for the method of principles over the reductive method is a point of divergence between him and Wolff.
- 21 Knutzen, *Elementa philosophiae rationalis*, §§ 444–446.

False Subtlety] were not more successful.²²

Most other authors privileged the reductive method. Among them was Christian Wolff, who was by far the most influential writer on logic in eighteenth-century Germany. Wolff shares the then widespread distrust for the fourth figure, which he disregards entirely.²³ He explains how second- and third-figure syllogisms can be reduced to the first figure.²⁴ He adds that ‘the inferences that take place in the second and third figure can be accepted as valid [*richtig*] only because it is possible to *reduce* them to the first figure’.²⁵ He even goes as far as to claim that second- and third-figure syllogisms are actually ‘cryptic first-figure syllogisms’,²⁶ that is, first-figure syllogisms whose ‘authentic form is not apparent’.²⁷ First-figure syllogisms, in turn, depend on the *dictum de omni et nullo* (henceforth simply “the *dictum*”), which is the conjunction of two principles:

Dictum de omni: ‘Whatever can be affirmed of a whole genus or species is also affirmed of whatever is contained under that genus or species’.²⁸

Dictum de nullo: ‘Whatever is denied of a whole genus or species must also be denied of whatever is contained under that genus or species’.²⁹

Wolff characterizes genera and species extensionally, as classes, but also

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- 22 Knutzen, *Elementa philosophiae rationalis*, § 443. Knutzen criticizes two such putative principles, including Joachim Georg Daries’ *principium convenientiae*, and he notes that the *dictum de omni et nullo* (endorsed by Wolff) is disputed. Like Knutzen, Samuel Christian Hollmann has no time for syllogistic reductions. See his *Philosophia rationalis, quae logica vulgo dicitur, multum aucta et emendata*, Göttingen 1746, § 474. Among earlier texts, the widely read *Port-Royal Logic* employed the method of principles. See Antoine Arnauld and Pierre Nicole, *The Port-Royal Logic*, ed. Thomas Spencer Baynes, Edinburgh 1861, 190–191.
- 23 The same attitude toward the fourth figure can be found among Wolff’s disciples. His faithful follower, Friedrich Christian Baumeister, explains what the fourth figure is, but he only provides rules for the first three figures and he only mentions their moods. See his *Institutiones philosophiae rationalis*, Wittenberg 1735, repr. in Wolff, *Gesammelte Werke*, sect. 3, vol. 24, §§ 260, 269–278, 281; Hollmann, *Philosophia rationalis*, §§ 455–474. For an overview of early modern attitudes toward the fourth figure, see Rescher, *Galen and the Syllogism*, 34–38.
- 24 Wolff, *Philosophia rationalis*, §§ 384, 389, 396. Wolff’s *German Logic* focuses only on first-figure syllogisms. See Christian Wolff, *Vernünftige Gedancken von den Kräfften des menschlichen Verstandes und ihrem richtigen Gebrauche in Erkänntniß der Wahrheit*, ed. Hans Werner Arndt, in Wolff, *Gesammelte Werke*, sect. 1, vol. 1, Hildesheim 1962 [1754], Ch. 4.
- 25 Christian Wolff, *Ausführliche Nachricht von seinen eigenen Schrifften, die er in deutscher Sprache [...] heraus gegeben*, 2nd enlarged ed., Frankfurt a.M. 1733, repr. in Wolff, *Gesammelte Werke*, sect. 2, vol. 9, § 201.
- 26 Wolff, *Philosophia rationalis*, §§ 385, 397.
- 27 Wolff, *Philosophia rationalis*, § 365.
- 28 Wolff, *Philosophia rationalis*, § 346.
- 29 Wolff, *Philosophia rationalis*, § 347. Christian Wolff (§ 402) ascribes the thesis that the *dictum* is the foundation of syllogisms to Aristotle. However, this is controversial. See e.g. Ebert, ‘Michael Wolff über Syllogismen bei Aristoteles und Vernunftschlüsse bei Kant’, 357–365; Michael Wolff, ‘Vollkommene Syllogismen und reine Vernunftschlüsse: Aristoteles und Kant: Eine Stellungnahme zu Theodor Eberts Gegeneinwänden. Teil 1’, *Journal for General Philosophy of Science*, 41 (2010), 199–213, 208–212.

intensionally, as sets of shared features.³⁰ Accordingly, the *dictum* can be read both extensionally, as in Wolff's *German Logic*, and intensionally, as in the works of his disciple Georg Friedrich Meier.³¹ On the extensional interpretation, the *dictum* states that whatever property can be truthfully ascribed or denied of all members of a class can be truthfully affirmed or denied of any of those members individually.³² On the intensional interpretation, the *dictum* states that whatever feature is part of the content of the concept of a genus or species is also part of the content of the concepts of its lower species or genera. In Wolff's view, two of the four forms of the first figure, *Barbara* (**AAA-1**) and *Darii* (**AII-1**), are 'nothing else than the distinct application' of the *dictum de omni*. The other two forms, *Celarent* (**EAE-1**) and *Ferio* (**EIO-1**), are applications of the *dictum de nullo*.³³

Since the *dictum* is the foundation of first-figure syllogisms and syllogisms in other figures can be reduced to them, the *dictum* is the 'solid and unshaken foundation on which the entire doctrine of syllogism is to be erected'.³⁴ It is a solid foundation because its truth is evident to whoever contemplates it. However, it is not a first principle, but an intermediate principle, because it can be proven on the basis of a more basic principle. According to Wolff, one can prove the *dictum* by showing that its negation involves a contradiction and, thus, is false.³⁵ Being a *reductio ad absurdum*, this argument presupposes the validity of the law of excluded middle. Wolff regards it as a corollary of the law of contradiction,³⁶ which is the first principle of his entire philosophy. In Wolff's eyes, then, the law of contradiction provides the ultimate basis of the reductive strategy for the foundation of syllogistic inference. Meier explains the rationale of this strategy with his usual clarity:

By deriving the rules of syllogisms from the law of contradiction, we prove that they are not, as it were, arbitrary commands of philosophers, but absolutely necessary truths, and that the syllogisms which are formed in accordance with them have a necessarily correct form, on which we can rely with the most perfect trust.³⁷

Wolff's successors were generally sympathetic toward his attempt to reduce all syllogisms to an intermediate principle which, in turn, depends on one or more first

30 Wolff, *Philosophia rationalis*, §§ 44–45.

31 See Wolff, *Gedancken von den Kräfte[n]*, Ch. 4, §§ 2, 4; Georg Friedrich Meier, *Vernunftlehre*, ed. Günter Schenk, Halle/Saale 1997 [1752], § 401; Georg Friedrich Meier, *Auszug aus der Vernunftlehre*, in Kant, *Gesammelte Schriften*, vol. 16, § 363.

32 Crusius clearly explains this interpretation of the *dictum* in his *Weg zur Gewißheit*, § 282.

33 Wolff, *Philosophia rationalis*, § 380n.

34 Wolff, *Philosophia rationalis*, § 353n. Additionally, Wolff formulates foundational principles for second- and third-figure syllogisms (*Philosophia rationalis*, §§ 381, 389). The principle of second-figure syllogisms is a corollary of the *dictum*. The principle of third-figure syllogisms is a procedure to obtain them from first-figure syllogisms.

35 Wolff, *Philosophia rationalis*, §§ 347n, 348n; *Gedancken von den Kräfte[n]*, Ch. 4, § 5. As Matt Hettche notes, 'a proposition could be known immediately one way and yet, in another way, follow as a conclusion of a sound deductive argument' ('Christian Wolff', in Edward N. Zalta [ed.], *The Stanford Encyclopedia of Philosophy*, Fall 2008 Edition, <http://plato.stanford.edu/archives/fall2008/entries/wolff-christian/>, § 6). According to Wolff, this is the case for the *dictum*.

36 See Christian Wolff, *Philosophia prima sive ontologia*, Frankfurt a.M. 1736, repr. in Wolff, *Gesammelte Werke*, sect. 1, vol. 3, § 54.

37 Meier, *Vernunftlehre*, § 400.

principles of all philosophy. However, they disagreed on whether the *dictum* is a suitable intermediate principle. Joachim Georg Daries, whose logic displays some independence from Wolff, claimed that the *dictum* depends on the *principium convenientiae*: ‘the things that can be combined with the same third item can also be combined with each other under the same respect’.³⁸ The Wolffian Hermann Samuel Reimarus agreed that a variant of the *principium convenientiae* is the foundation of all syllogisms, but he dispensed with the *dictum* altogether.³⁹ Reimarus had two complaints against the *dictum*. It is not basic, because it depends on the laws of identity and contradiction. It cannot be straightforwardly applied to second-, third-, or fourth-figure syllogisms, because what ‘is affirmed or denied’ by them ‘is not always predicated of the whole species of genus [...] Therefore, it was even more necessary’ for him ‘to establish the validity [*Richtigkeit*] of all syllogisms by means of a more general rule’ than the *dictum*,⁴⁰ the *principium convenientiae*.

While the limited applicability of the *dictum* led Reimarus to replace it with a different principle, it led others to complement it with other principles. Meier introduced three additional principles: ‘if the sufficient reason is true, its consequence too is true [...] if the consequence is false, its sufficient reason too is false’; ‘if one of [two] contradictory judgements is true, the other is false, and if it is false, the other is true’; ‘if a judgement is true, what has been derived from it through a truth-preserving logical combination must be true too’.⁴¹ For the anti-Wolffian Christian August Crusius,⁴² the *dictum* is just one (the sixteenth) of the 43 principles of valid syllogistic inferences. Each of those principles derives from the law of contradiction, the principle of sufficient reason, or both.

In sum, most of Kant’s immediate predecessors shared the goal of establishing the validity of syllogistic inference through a reductive strategy. However, they disagreed on what principles should provide the basis for the reduction. Crusius, Daries, Meier and Reimarus all made somewhat original proposals which disagreed with Wolff and one another. Nor would the practice of formulating new principles of syllogisms stop with the publication of the *False Subtlety* in 1762. Lambert, whose views on syllogism were antithetical to Kant’s, and Feder, who endorsed Kant’s central claims, formulated new principles of syllogisms in 1764 and 1774.⁴³ Even the author of a very favourable review of the *False Subtlety* took the opportunity to correct Kant’s principles.⁴⁴

38 Daries, *Introductio in artem inveniendi*, Praecognita § 19n; Analytica §§ 252–253.

39 Reimarus, *Vernunftlehre*, §§ 138–139.

40 Reimarus, *Vernunftlehre*, § 139. Reimarus could employ the second- and third-figure syllogisms discussed in Section 2.2 as examples.

41 Meier, *Vernunftlehre*, §§ 402–404; *Auszug aus der Vernunftlehre*, §§ 364–366. According to Meier, these principles follow from the law of contradiction (*Vernunftlehre*, § 400).

42 Crusius, *Weg zur Gewißheit*, §§ 273–296.

43 See Johann Heinrich Lambert, *Neues Organon oder Gedanken über die Erforschung und Bezeichnung des Wahren und dessen Unterscheidung vom Irrthum und Schein*, Leipzig 1764, vol. 1, 142–143; Johann Georg Heinrich Feder, *Logik und Metaphysik*, 4th ed., Göttingen 1774, § 43. Feder’s references indicate that he regarded his new principle as equivalent both to the *dictum* and to the principles of the *False Subtlety*. The first edition of Feder’s *Logik und Metaphysik*, which I could not access, was published in 1769.

44 Anon., review of Immanuel Kant, *Die falsche Spitzfindigkeit der vier syllogistischen Figuren*, *Briefe, die Neueste Litteratur betreffend*, 22 (1765), 147–158, 150–151. Tonelli, following Erich Adickes, states that the author of this review was Moses Mendelssohn. See Tonelli, *Elementi metodologici e*

1.2 The Status and Usefulness of the Second, Third, and Fourth Figure

Within Wolff's logic, the first figure has a privileged status for three reasons:

- (a) it is the only figure to which all syllogisms of any other figure can be reduced.
- (b) it is the only figure in which there are syllogisms with universal affirmative conclusions (in *Barbara*), particular affirmative conclusions (in *Darii*), universal negative conclusions (in *Celarent*), and particular negative conclusions (in *Ferio*).⁴⁵ By contrast, second-figure syllogisms only have negative conclusions. Third-figure syllogisms only have particular conclusions. Fourth-figure syllogisms have negative conclusions and particular affirmative conclusions, but not universal affirmative conclusions.
- (c) first-figure syllogisms are more natural than syllogisms in the other figures. This naturalness thesis might mean:

(*natural*₁) people have a disposition to employ first-figure syllogisms more often than syllogisms in the other figures.

(*natural*₂) formulating first-figure syllogisms is easier (takes up fewer cognitive resources) than formulating syllogisms in the other figures.

(*natural*₃) people typically formulate first-figure syllogisms more quickly than syllogisms in the other figures.

With his naturalness thesis, Wolff means at least *natural*₁, because he holds that the naturalness of first-figure syllogisms derives from their proximity to the *dictum*.⁴⁶ According to Wolff, we have an innate disposition to follow the laws of logic,⁴⁷ some of them more than others. When we reason, we do not typically follow the inference schemata of the second, third, or fourth figure, but the *dictum*,⁴⁸ of which the forms of first-figure syllogisms are paraphrases.

Because of its primacy, Wolff calls the first figure 'the perfect figure'.⁴⁹ He claims that the first figure 'is sufficient for reasoning' and that 'we can be content with the first figure alone'.⁵⁰ His discussion of the second and third figure in the *Latin Logic* provides reasons for dismissing them. He had done so in the shorter *German Logic*, which

metafisici in Kant dal 1745 al 1768, 208. The *Zeitschriften der Aufklärung* website (<http://www.ub.uni-bielefeld.de/diglib/aufkl/browse/brieneulit/21765.html>, visited on 10 July 2014) states that the author was Friedrich Gabriel Resewitz.

45 Wolff, *Philosophia rationalis*, § 378; *Gedancken von den Kräfte*, Ch. 4, § 14.

46 Wolff, *Philosophia rationalis*, § 380: 'First-figure syllogisms are the most natural, that is, they are the closest to the *dictum de omni et nullo*'.

47 Wolff, *Gedancken von den Kräfte*, Ch. 16, § 3.

48 Logic as a discipline (*logica artificialis docens*) illustrates the principles that we spontaneously follow in our ordinary reasoning, called 'natural logic' (*Philosophia rationalis*, § 11). 'When we reason within natural logic, we do not pay attention to anything else than the *dictum de omni et nullo*' (§ 280).

49 Wolff, *Philosophia rationalis*, § 401. See § 400: 'a figure in which all propositions can be inferred is called a *perfect figure*'.

50 Wolff, *Philosophia rationalis*, § 379.

discusses only first-figure syllogisms.⁵¹

Of Wolff's reasons for privileging the first figure, (a) and (b) were not disputed.⁵² However, his claim that the first figure is the most natural was problematic. Not only did its justification invoke the *dictum*, that was controversial, but also, on all three readings, it is an empirical claim. Yet, Wolff provided no empirical evidence for it.

One could challenge the naturalness thesis in two ways.⁵³ First, one could hold a large-scale empirical inquiry of people's reasoning patterns, which Kant's predecessors did not carry out. Hence, there was no hard evidence to establish whether people reason mostly in the first figure, as Wolff held, or whether 'the understanding thinks almost more often by means of the other syllogistic figures, especially the second and fourth, than [...] in the first', as Crusius stated.⁵⁴ Second, one could claim that syllogisms in the second or third figure are 'extremely *natural* and *simple*', whereas their reductions to the first figure are 'very *convoluted* and *forced*'.⁵⁵ Hollmann and Knutzen held this.

An example that supports their view can be found in Johann Heinrich Lambert's *New Organon*, which was published shortly after Kant's *False Subtlety*.⁵⁶ According to Lambert, when we are faced with the sentences:

All circles are round.
No rectangles are round.

we can infer "no rectangles are circles" straightaway. The inference with which we do so is a second-figure syllogism in *Camestres* (**AEE-2**). Alternatively, we can derive the conclusion from the premises with two immediate inferences and a first-figure syllogism:

- (a) from "all circles are round" we can infer "whatever is not round is not a circle", that is, "no non-round things are circles" through contraposition;
- (b) from "no rectangles are round" we can infer "all rectangles are non-round" through obversion;
- (c) we can use the conclusions of these inferences as the premises of a syllogism in *Celarent* (**EAE-1**):

51 Ludwig Philipp Thümmig's manual of Wolffian logic too discusses only the first figure. See his *Institutiones philosophiae Wolfianae, in usus academicos adornatae*, Frankfurt a.M. 1725–1726, repr. in Wolff, *Gesammelte Werke*, sect. 3, vol. 19, part 1, §§ 33–50. Reimarus (*Vernunftlehre*, 143) agrees that it is not necessary to discuss any other figure besides the first. However, he states that using the other figures may be useful in dialectical contexts, to refute one's opponent. Although Kant agrees, he prefers to 'pass over in silence' this 'academic athleticism' because 'it does not contribute greatly to the advancement of truth' (*Spitzf.*, 2:57).

52 Several authors stated (b), e.g. Crusius, *Weg zur Gewißheit*, §§ 333–335; Knutzen, *Elementa philosophiae rationalis*, § 456; Reimarus, *Vernunftlehre*, §§ 142, 148.

53 Rescher (*Galen and the Syllogism*, 42) noted this.

54 Crusius, *Weg zur Gewißheit*, § 332. Crusius' suggestion that 'one can find' this 'in experience' would have hardly convinced Wolff.

55 Hollmann, *Philosophia rationalis*, § 474; see Knutzen, *Elementa philosophiae rationalis*, § 457.

56 Lambert, *Neues Organon*, vol. 1, 139–140. I have modified Lambert's original example, which appears to mistake a fourth-figure syllogism in non-canonical form for a first-figure syllogism.

No non-round things are circles.
 All rectangles are non-round.
 ∴ No rectangles are circles.

When Wolff's peers claimed that second- and third-figure syllogisms are more 'natural and simple' than their 'convoluted and forced' reductions to the first figure,⁵⁷ they appear to have had examples like this in mind. They expected their readers to agree that formulating the second-figure syllogism is easier (*contra natural*₂) and faster (*contra natural*₃) than formulating their reductions.⁵⁸ If this is true, if the example can be generalized, and if people have a disposition to employ easier and faster inferences more often than than harder and slower ones, there might be reason to reject *natural*₁ too.

However things may be with regard to the naturalness thesis, Crusius highlighted another reason why one should not be content with the first figure, as Wolff had suggested. All syllogistic forms should be discussed because the aim of logic is to explain all formally valid inference forms. Crusius makes this clear when he criticizes those who 'did not want to admit any figures and moods that can be reduced to moods that do not belong to the first figure'.⁵⁹ With this convoluted expression, Crusius might be referring to those syllogistic forms, like *Disamis* (**IAI-3**), which can only be reduced to the first figure by being first reduced to the third or fourth figure.⁶⁰ The complexity of their reduction provides no reason to disregard them because,

if the understanding can form syllogisms in various ways and if logic must explain its manifold operations, it is not superfluous to learn those forms too [...]⁶¹

Crusius' tendency toward comprehensiveness contrasts sharply with Kant's view that 'logic' should only focus on the 'simplest mode of cognition',⁶² to which other modes of cognition (like second-, third-, and fourth-figure syllogisms) can be reduced.

Given these divergences, what constituted a 'false [i.e. useless] subtlety' was far from

57 Hollmann, *Philosophia rationalis*, § 474.

58 Lambert (*Neues Organon*, vol. 1, 139) argues against *natural*₂. He states that the reduction of his example involves an immediate inference, and a proposition derived through an immediate inference 'is definitely not always as evident as the proposition from which we derived it'. Crusius (*Weg zur Gewißheit*, § 332) argues against *natural*₃. He notes that the propositions from which we can infer a conclusion may come to mind in a different order from that of the first figure, as in Lambert's example. In this case, we can infer the conclusion more quickly by employing a second-figure syllogism than immediate inferences and a first-figure syllogism.

59 Crusius, *Weg zur Gewißheit*, § 331.

60 A syllogism in *Disamis* can be reduced to *Darii* (**AII-1**) in two ways. One can transform it into *Datisi* (**AII-3**) through transposition of the premises, and transform the latter into *Darii* (**AII-1**) through simple conversion of the minor premise (Capozzi, 'Osservazioni sulla riduzione delle figure sillogistiche in Kant', 86). Alternatively, one can transform *Disamis* into *Dimatis* (**IAI-4**) and this into *Darii* (**AII-1**) through simple conversion of the major premise, transposition of the premises, and simple conversion of the conclusion (Myrstad, 'Kant's Treatment of the Bocardo and Barocco Syllogisms', 166–168).

61 Crusius, *Weg zur Gewißheit*, § 331. For a similar point, see Rogelio Rovira, '¿Es una "falsa sutileza" la division lógica de las figuras del silogismo? Sobre la crítica de Kant a la doctrina aristotélica del silogismo categórico', *Teorema*, 29 (2010), 5–21, 19.

62 *Spitzf.*, 2:56.

agreed. Those who stressed the preeminence of the first figure, like Wolff, noted that the other figures can be reduced to it and held that discussing them thoroughly is a useless subtlety. Those who advocated the usefulness of three or all four figures, like Hollmann and Knutzen, often refrained from ‘annoying readers’ by ‘dwelling on the reduction principles with which Scholastics filled the memory of their young pupils’.⁶³ If Knutzen, who wrote these words in 1751, had lived long enough to read the *False Subtlety*, he might well have regarded Kant’s reduction principles as the truly useless subtlety in the doctrine of syllogism.

2 Kant’s View of Syllogism in the *False Subtlety*

In this context, Kant’s *False Subtlety* puts forward a very clear-cut view. The only portion of the doctrine of syllogism that logic should be concerned with is that regarding the first figure. Although ‘valid inferences may be drawn in all [...] four figures’,⁶⁴ there is no need to dwell on the second, third, or fourth figure, the ‘rules peculiar’ to each of them, or the list of valid forms which are found in each figure.⁶⁵ This is because the aim of logic is ‘reducing everything to the simplest mode of cognition’⁶⁶ and syllogisms in the second, third, and fourth figure can be reduced to combinations of first-figure syllogisms and immediate inferences. Kant defends these views by putting forward an account of the function of syllogism, two new principles of syllogisms, a sketch of the procedures for reducing the second, third, and fourth figure to the first, and the claim that people ordinarily follow those procedures when making inferences.

2.1 Background: Marks, Judgements, and Syllogisms

Kant discusses the foundations of syllogistic inference in the first two sections of the *False Subtlety*. There, he introduces two first principles of all syllogisms, building on his notion of mark and his definitions of judgement and syllogism. Kant holds that the content of some concepts is simple and unanalysable. Other concepts derive from the combination of further concepts, which can be identified through a process of analysis. An example is provided in Figure 1. Sometimes, Kant calls mark [*Merkmal, nota*] a concept that composes another concept: for instance, when he mentions ‘a mark of a mark’.⁶⁷ Other times, he calls mark a property of a thing (‘a mark of the thing itself’⁶⁸). I

63 Knutzen, *Elementa philosophiae rationalis*, § 457.

64 Spitzf., 2:55.

65 Spitzf., 2:56. This claim relates to the practical purpose of the *False Subtlety* (2:57). Kant published it together with the announcement of his logic lectures to explain why they covered syllogistic moods and figures only briefly. Unfortunately, we cannot check this statement against the transcripts of Kant’s lectures from those years. The earliest logic transcripts that are available to us, the *Logik Blomberg* and *Logik Philippi*, are based on lectures from the 1770s.

66 Spitzf., 2:56. Accordingly, the ‘four modes of inference ought to be simple, unmixed and free from concealed supplementary inferences’ (2:56). As we shall see, in Kant’s view, only one of the four figures satisfies this requirement.

67 Spitzf., 2:49. Such a mark is a concept, rather than a property, because Kant calls it “the middle principal concept” of a syllogism (2:48).

68 Spitzf., 2:49.

will call the former marks_c and the latter marks_p.⁶⁹

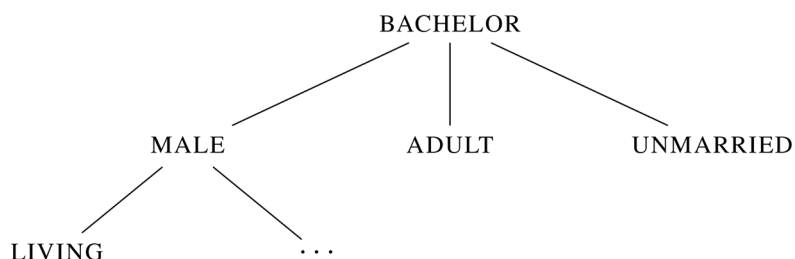


Figure 1: The content of a concept

‘To compare something as a mark with a thing is to *judge*’.⁷⁰ The result of this comparison is a mental content, a judgement, that combines a subject concept with a predicate concept. The subject concept designates the ‘thing’, broadly understood,⁷¹ that is the subject of predication. The predicate concept designates a feature (‘a mark of some thing or other’⁷²). The copula unaccompanied by negation expresses the belonging of the mark_p to the subject of predication. The copula accompanied by negation expresses the non-belonging of the mark_p to the subject of predication.⁷³

‘That which is a mark of a mark of a thing is called a *mediate* mark of that thing’.⁷⁴ More precisely,

assuming that an object *a* has properties *P* and *Q*, if the concept of *P* is a component of the concept of *Q*, then *P* is a mediate mark of *a*.⁷⁵

69 On this distinction, see Houston Smit, ‘Kant on Marks and the Immediacy of Intuition’, *Philosophical Review*, 109 (2000), 235–266, 248–251. Kant’s ambiguous use of “mark” might lead to the suspicion that he confuses the ‘properties of things which fall under’ a concept with the ‘characteristics which make up the concept’ (Gottlob Frege, *Die Grundlagen der Arithmetik: Eine logisch mathematische Untersuchung über den Begriff der Zahl*, ed. Christian Thiel, Hamburg 1988 [1884]; trans. *The Foundations of Arithmetic: A Logico-Mathematical Enquiry into the Concept of Number*, ed. J. L. Austin, Oxford 1974, § 53). Related objections against Kant’s principle of syllogisms are discussed in Wolff, ‘Vollkommene Syllogismen und reine Vernunftschlüsse’, 348–350; Ebert, ‘Michael Wolff über Syllogismen bei Aristoteles und Vernunftschlüsse bei Kant’, 365–366.

70 *Spitzf.*, 2:47.

71 I argue that Kant uses a broad notion of object, which includes non-existent items, in ‘Kant on Existential Import’, *Kantian Review*, 19 (2014), 207–232, 221–223.

72 *Spitzf.*, 2:47.

73 Kant uses stronger terms than “non-belonging” to designate the relation between subject and predicate in negative judgements: “contraposed”, “contradicts”, “contrasting” [*entgegen gesetzt, widerspricht, widerstreitend*] (*Spitzf.*, 2:47). These and other expressions may suggest that for Kant, ca.1762, all truths are analytic. Charles Nussbaum, among others, holds this. See his ‘Critical and Pre-Critical Phases in Kant’s Philosophy of Logic’, *Kant-Studien*, 83 (1992), 280–293, 280, 284. I do not take a stand on this issue.

74 *Spitzf.*, 2:47.

75 Further, for every object *a* and every property *P*, that belongs to *a*, *P* is a mediate mark of *a* if and only if *a* has a property *Q*, such that the concept of *P* is a component of the concept of *Q*.

Consider for instance the concept of bachelor, as represented in Figure 1. That concept has some first-level components (the concepts of male, adult, and unmarried), which have in turn other components.⁷⁶ Being a male and being a living being are both properties (marks_p) of bachelors and the concept of living being is a component (a mark_c) of the concept of male. Hence, being a living being is a mediate mark of a bachelor. By contrast, the properties corresponding to first-level components of the concept of bachelor (being male, adult, and unmarried) are immediate marks of the concept of bachelor.

Kant's predecessors and, in the 1780s, Kant himself distinguished between two ways of formulating syllogisms or chains of syllogisms. We may entertain the premises and infer the conclusion from them, employing syllogism as a tool for discovering truths that we had not previously thought of. Alternatively, we may start from the conclusion and seek its justification, that is, a reason for asserting the belonging or non-belonging of the mediate mark_p expressed by the predicate to the item(s) referred to by the subject. In this case, we look for a middle term which we can combine with the subject and the predicate, so as to formulate two sentences which we take to be true and from which we can derive the conclusion.⁷⁷

In the *False Subtlety*, Kant regards syllogism as a tool for justification, rather than discovery. He defines a syllogism as a '*judgement which is made by means of a mediate mark*'. 'In other words, a syllogism is the comparison of a mark with a thing by means of an intermediate mark'.⁷⁸ The comparison presupposes that the conclusion is being thought and it aims to establish its truth. It should lead us 'clearly to recognise the relation of the mark [the predicate of the conclusion] to the thing [its subject]'.⁷⁹ If the conclusion is an affirmative judgement, the relation that it expresses is that the predicate belongs to the subject.⁸⁰ We should look for an intermediate mark (a middle term) that gives us reason to believe that the predicate belongs to the subject.⁸¹ More specifically, we should look for a mark_c of the subject concept, of which the predicate is in turn a mark_c:

In order clearly to recognise the relation of the mark to the thing in the judgment: *the human soul is a mind*, I employ the intermediate mark *rational*, so that, by its means, I regard *being a mind* as a mediate mark of the human soul. In this case, three judgements must necessarily occur:

1. Being a mind is a mark of that which is rational;
2. Rational is a mark of the human soul;
3. Being a mind is a mark of the human soul.

76 I set aside the possibility that they may be simple, unanalysable concepts for the sake of simplicity.

77 Hollmann, *Philosophia rationalis*, § 447; Reimarus, *Vernunftlehre*, § 150; Lambert, *Neues Organon*, vol. 1, 154–155; A331/B387–388.

78 *Spitzf.*, 2:48.

79 *Spitzf.*, 2:48.

80 More precisely, it states that *the mark expressed by the predicate* belongs to *the item(s) referred to by the subject*. I omit the italicized expressions for the sake of simplicity.

81 Traditional logic provided a set of rules, called *pons asinorum*, for finding suitable middle terms. Andreas Rüdiger formulated a new version of those rules. Kant mentions them neither in the *False Subtlety* nor, as far as I am aware, elsewhere. See Heinrich Schepers, 'Eselsbrücke', in Ritter et al. (eds.), *Historisches Wörterbuch der Philosophie*, vol. 2, 743–745.

[...] Cast in the form of judgements, the three operations would run: all that is rational is a mind; the soul of man is rational; therefore, the soul of man is a mind.⁸²

If, instead, we want to establish a negative conclusion, we should look for a mark_c of its subject, which is incompatible with a mark_c of the predicate.

If the premises of the resulting syllogism contain mediate mark_c of the subjects, they can be established through further syllogisms. If they contain immediate marks, ideally, we will recognize their truth through experience or intuition.⁸³ Readers may wonder why the process could not unfold the other way round: start from judgements established through experience or intuition and deduce new conclusions from them. The *False Subtlety* does not answer this question. It leaves the reader wondering why Kant does not echo Darries' view that 'syllogisms are a means of invention',⁸⁴ but portrays them solely as tools for justifying propositions by seeking suitable middle terms.⁸⁵

2.2 The Foundations of Syllogistic Inference

We have seen that Kant identifies syllogism with the activity of asserting that some marks belong or do not belong to things on the ground that they belong, or are incompatible with, some of their other marks. Kant's principles of syllogisms explain why we are entitled to make these assertions:

[T]he first general rule of all affirmative syllogisms [i.e. syllogisms whose conclusion is an affirmative sentence] is this: *A mark of a mark is a mark of the thing itself (nota notae est etiam nota rei ipsius)*. And the first general rule of all negative syllogisms is this: *that which contradicts the mark of a thing, contradicts the thing itself (repugnans notae repugnat rei ipsi)*.⁸⁶

Kant goes on to explain that his principles state the reasons for the truth of the *dictum de omni et nullo*. He formulates the *dictum de omni* as: 'that which is universally affirmed of a concept, is also affirmed of everything that falls under that concept'.⁸⁷ What is affirmed of a concept is a mark. It can be affirmed of the things that fall under the concept because, as the *nota notae* principle states, a mark of a mark of a concept is a mark of the things that fall under it.⁸⁸ The same applies, *mutatis mutandis*, to the *dictum de nullo*. Kant also claims that his principles are first principles as they cannot be proven from more basic principles. This is because 'a proof is only possible by means of one or more syllogisms' and any syllogisms presuppose the truth of his principles.⁸⁹

82 *Spitzf.*, 2:48. Kant provides a similar example for negative judgements.

83 For Kant's views on intuition as a source of justification, see Section 3.2.

84 Darries, *Introductio in artem inveniendi*, Praecognita § 128n.

85 In 1781 too, Kant regards logic as a tool not for generating cognitions, but only for assessing them (A60/B84, A796/B824). This does not shed light on why the *False Subtlety*, which was published 19 years earlier, is silent on whether we can use syllogisms for invention.

86 *Spitzf.*, 2:49.

87 *Spitzf.*, 2:49, trans. modified.

88 Kant combines this explanation with the claims that lower concepts are abstracted from things and higher concepts are abstracted from lower concepts. Kant's explanation is independent from those claims.

89 *Spitzf.*, 2:49.

Kant's *nota notae* and *repugnans notae* principles cannot be found in the works of his immediate predecessors.⁹⁰ Aristotle stated the *nota notae* principle in the *Prior Analytics*,⁹¹ but I have found no evidence that Kant was aware of this. The view that the *nota notae* and *repugnans notae* principles provide the foundation of the *dictum* is not found in Aristotle either. It was probably an original claim of Kant. However, Kant grossly overstates his originality when he claims that the *dictum de omni* and the *dictum de nullo* are 'the principles which all logicians have hitherto regarded as the first rules of all syllogisms'.⁹² On the one hand, those who regarded them as principles of syllogisms, like Wolff, did not regard them as first principles. They took them to derive from the law of contradiction. On the other hand, in putting forward new principles of syllogisms, Kant was not departing from 'all logicians'. He was following on the footsteps of Crusius, Daries, Meier, and Reimarus, all of whom had proposed new principles of syllogisms.⁹³ It is hard to believe that Kant's overstatement was unintentional. Kant had read the texts in which they propose those new principles.⁹⁴ He also commented on Meier's discussions of syllogism for more than ten times in the logic courses that he held before 1762.⁹⁵

90 They are similar, but not identical to the principles of judgments of Kant's *New Elucidation* of 1755. Cf. Sgarbi, *Logica e metafisica nel Kant precritico*, 208.

91 Rovira, '¿Es una "falsa sutileza" la division lógica de las figuras del silogismo?', 15.

92 Spitzf., 2:49.

93 Other aspects of the *False Subtlety* are not particularly original. (1) Kant's conception of the role of syllogism is similar to Reimarus' characterization of syllogism as a way of establishing the agreement or contrast between the subject and predicate of 'judgements of mediate insight' (*Vernunftlehre*, §§ 137–138). It also recalls earlier definitions of syllogism, e.g. by Baumeister, *Institutiones philosophiae rationalis*, § 237, and Hollmann, *Philosophia rationalis*, § 446, besides the passages of the Port-Royal Logic and Segner's *De syllogismo* mentioned in Mirella Capozzi and Gino Roncaglia, 'Logic and Philosophy of Logic from Humanism to Kant', in Leila Haaparanta (ed.), *The Development of Modern Logic*, New York 2009, 78–158, 102, and in Sgarbi, *Logica e metafisica nel Kant precritico*, 208. See also a passage by Johann Heinrich Lambert, whose date of composition is unknown (in his *Logische und philosophische Abhandlungen*, ed. Johann Bernoulli, Berlin 1782, vol. 1, 230), and the passages by Sulzer and 's Gravesande quoted in Sgarbi, *Logica e metafisica nel Kant precritico*, 208. (2) Reimarus mentioned that syllogisms can serve for discovery besides justification. Yet, his account of syllogism, like Kant's, focuses on the search for premises to justify conclusions. For a well-known precedent, see Arnauld and Nicole, *The Port-Royal Logic*, 191: 'the conclusion is supposed before we make the syllogism to prove it'. (3) Before Kant, Meier and Reimarus had used the term "Vernunftschluß" to designate syllogisms. See Meier, *Vernunftlehre*, § 390; Meier, *Auszug aus der Vernunftlehre*, § 354; Reimarus, *Vernunftlehre*, §§ 134, 354.

94 The only possible exception is Daries' *Introductio in artem inveniendi*. Crusius was one of Kant's main philosophical influences in the 1750s and 1760s. Kant refers to a passage of his *Weg zur Gewißheit* in Spitzf., 2:54n, 55. Kant used Meier's *Auszug* and, possibly, his *Vernunftlehre* as textbooks for his logic lectures since the 1750s. Kant owned and read Reimarus' *Vernunftlehre*. See Arthur Warda, *Immanuel Kants Bücher: Mit einer getreuten Nachbildung des bisher einzigen bekannten Abzuges des Versteigerungskataloges der Bibliothek Kants*, Berlin 1922, 53; *Größen*, 2:191. Reimarus' *Vernunftlehre* is the likely source of several of Kant's views. See J. Bergmann, 'Zur Lehre Kants von den logischen Grundsätzen', *Kant-Studien*, 2 (1898), 323–348, 330; Norbert Hinske, 'Reimarus zwischen Wolff und Kant: Zur Quellen- und Wirkungsgeschichte der "Vernunftlehre" von Hermann Samuel Reimarus', in Wolfgang Walter and Ludwig Borinski (ed.), *Logik im Zeitalter der Aufklärung: Studien zur "Vernunftlehre" von Hermann Samuel Reimarus*, Göttingen 1980, 9–32; Michael Oberhausen, *Das neue Apriori: Kants Lehre von einer ursprünglicher Erwerbung apriorischer Vorstellungen*, Stuttgart 1997, 99–112.

95 Kant held 13 lecture courses on logic between the beginning of his teaching and the winter semester 1761/1762. He might have used Baumeister's textbook during some of the earlier courses. See Steve

Worse still, one of the reasons why Reimarus and, in all likelihood, Meier rejected the *dictum* as the foundation of syllogisms spells trouble for Kant's new principles too. Meier would not have complemented the *dictum* with three other principles if he thought that the *dictum* alone provides the foundation of all syllogisms. Reimarus openly complained that the *dictum* applies only to first-figure syllogisms.⁹⁶ Kant's new principles do not apply to all syllogisms either. They fail to apply to some second-, third-, and fourth-figure syllogisms.⁹⁷ Consider for instance an affirmative syllogism of the third figure (in *Disamis*, **IAI-3**):

Some painters are creative.
All painters are visual artists.
∴ Some visual artists are creative.

In Kant's terms, the syllogism ascribes a mark (creativity) to certain things (some visual artists). If the syllogism conformed to Kant's *nota notae* principle, it would ascribe creativity to some visual artists on the ground that they have another mark, which is expressed by the middle term (being a painter). Yet, the syllogism does not state that some visual artists are painters. It states the opposite, namely, that all painters are visual artists.⁹⁸ It follows that the syllogism, as it is, does not conform to Kant's principle.

As an example of a negative syllogism, consider a second-figure syllogism in *Baroco* (**AOO-2**):

All good historians have good memory.
Some academics do not have good memory.
∴ Some academics are not good historians.

The syllogism concerns some academics. It denies that they have the mark of being good historians. If the syllogisms conformed to Kant's *repugnans notae* principle, it would deny that they have that mark on the ground that it is incompatible with another mark of theirs. Yet, the syllogism does not deny that some academics are good historians because this is incompatible with a mark that they have, but because it entails having a feature (good memory) that they lack.⁹⁹

It may seem surprising that, even though he had read Meier's and Reimarus' texts, Kant proposed principles that fail to apply to all second-, third-, and fourth-figure

Naragon, *Kant in the Classroom*, <http://www.manchester.edu/kant/Lectures/lecturesListDiscipline.htm> (visited on 10 July 2014).

96 Reimarus, *Vernunftlehre*, § 139.

97 As we shall see, Kant proposes a method to transform them into syllogisms which conform to his principles. However, by Kant's own admission, this method cannot be applied to the affirmative forms of the fourth figure (*Bamalip* and *Dimatis*).

98 If we replaced "all painters are visual artists" with "some visual artists are painters", which we can infer from it by conversion, we would obtain an invalid syllogism with form **III-1**.

99 As an example of a fourth-figure syllogism that does not conform to Kant's principles, consider the following syllogism in *Baralip* (**AAI-4**): all phones are artefacts; all artefacts are material objects; some material objects are phones. If the syllogism conformed to the *nota notae* principle, it would predicate being a phone of some material objects on the ground that being a phone is a mark of one of their marks. Yet, the syllogism does not ascribe any other marks to material objects, besides being a phone. Hence, the syllogism does not conform to the *nota notae* principle.

sylllogisms. Kant was aware of this. He writes that ‘the supreme rules governing all syllogisms lead directly to that order of concepts which is called the first figure’.¹⁰⁰ To appreciate Kant’s motivation for focusing on first-figure syllogisms, we must turn to his views on the status and usefulness of the other figures.

2.3 *The Status and Usefulness of the Second, Third, and Fourth Figure*

The reason why Kant regards the principle of the first figure as the principle of all syllogisms is that, like Wolff, he subordinates the other figures to the first. He does not go as far as to claim that all valid second-, third-, or fourth-figure syllogisms are actually ‘cryptic first-figure syllogisms’.¹⁰¹ However, he does claim that they are valid only insofar as they can be reduced to the first figure. More precisely, he claims that they are valid only if their conclusion can be derived by carrying out immediate inferences on one or both premises and formulating a first-figure syllogism.¹⁰² An example of this procedure is the reduction of a second-figure syllogism in *Camestres* (**AEE-2**) to a first-figure syllogism in *Celarent* (**EAE-1**) that we encountered in Section 1.2. The *nota notae* and *repugnans notae* principles ground the validity of first-figure syllogisms and these, along with immediate inferences, ground the validity of all other syllogisms.¹⁰³ Hence, the *nota notae* and *repugnans notae* principles ground, directly or indirectly, the validity of all syllogisms.

Kant’s claim is not just that the reduction of non-first-figure syllogisms to the first figure provides a reason for regarding them as valid. Kant claims that they are valid only insofar as they can be reduced to the first figure. They should be called mixed or hybrid syllogisms because they are ‘*only possible* by combining more than three judgements’,¹⁰⁴ the fourth (and, in some cases, fifth) judgement being obtained through an immediate inference from one of the premises. By contrast, first-figure syllogisms are not mixed, but pure. This is because they do not require that ‘there must be inserted between’ the premises ‘some immediate inference which has been drawn from one or other of them, *if the argument is to be valid [bündig]*’.¹⁰⁵ This and similar statements¹⁰⁶ imply that the validity of non-first-figure syllogisms depends on the possibility of deriving their conclusion from the premises by means of immediate inferences and a first-figure syllogism.

As we saw above, valid syllogisms can be established through the method of principles, without reducing them to a privileged class. One can formulate a series of

100 *Spitzf.*, 2:57–58.

101 Wolff, *Philosophia rationalis*, §§ 385, 397.

102 See *Spitzf.*, 2:58: ‘all other transpositions of the middle term [second-, third-, and fourth-figure syllogisms] only yield valid inferences if, by means of easy and immediate inferences, they lead to such propositions as are connected in the simple order of the first figure’. Some of the reductions to which Kant refers also require the transposition of the premises. Kant accepts and employs it, but he denies that it is an immediate inference. See Capozzi, ‘Osservazioni sulla riduzione delle figure sillogistiche in Kant’, 87–89.

103 For Kant, ‘immediate inferences’ are ‘not [enthymematic] syllogisms’ (*Spitzf.*, 2:50).

104 *Spitzf.*, 2:50, italics added.

105 *Spitzf.*, 2:51, italics added.

106 If a syllogism is mixed, then ‘the conclusion is valid [*eine richtige Folge*] *only as a result of my*’ being able to carry out certain logical operations on the premises (2:51, italics added). Kant makes similar statements for third-figure syllogisms and negative fourth-figure syllogisms (2:53).

rules to which all valid syllogisms must conform and exclude the forms which violate them. Kant was aware of the possibility of employing this method. He could find it applied, *inter alia*, in Knutzen's logic manual. He used it in a personal note from the 1750s.¹⁰⁷ Although Kant knew that valid syllogisms can be established through the method of principles, he did not explain why he privileged the reductive method in the *False Subtlety*.

Just two years after the publication of the *False Subtlety*, Lambert would put forward proofs of the validity of syllogisms in each figure which do not rely on their reduction to any other figure. He took his proofs to show the mistake of those who

were misled to go as far as to regard the last three figures as indirect and capable only of a mediate proof, and to reject them as entirely unnatural, even though they admitted the validity of inferences in those figures.¹⁰⁸

Kant's view in the *False Subtlety* fits this description. Lambert's views would put pressure on those who rely on the reductive method to make the reasons for this choice explicit in a way that Kant did not do.

Kant's claim that any other syllogistic forms are valid only insofar as they can be reduced to the first figure entails that the forms which do not satisfy this constraint should be rejected. In fact, Kant denies the legitimacy of the syllogisms whose conclusion, to his mind, cannot be derived from the premises through immediate inferences and first-figure syllogisms. These are the affirmative forms of the fourth figure (*Bamalip* and *Dimatis*), which, however, are both valid.¹⁰⁹ Instead of calling them invalid,¹¹⁰ Kant states, rather vaguely, that they are 'not possible [...] at all'.¹¹¹ He provides a second reason for rejecting them, besides the fact that they cannot be reduced to the first figure with his favoured method. The reason is that their premises do not state the ground in virtue of which, if they are true, the conclusion too is true.¹¹² Since Kant does not spell out the relevant notion of ground or the reason why syllogistic premises should provide such a ground, his brief remark is hardly convincing as it stands.

Kant does not only state that the validity of syllogisms should be established through a reductive method, but he also claims that people follow it in their reasoning. He states that, when people infer the conclusion of a mixed syllogism from their premises (or, on Michael Wolff's reading, when they do so by running through all the required inferential steps¹¹³), they employ immediate inferences and a first-figure syllogism. In other words,

107 *Refl.* 3256, 16:740–742.

108 Lambert, *Neues Organon*, vol. 1, 135.

109 *Bamalip* is not valid if one rejects inferences by subalternation, but Kant and his peers accepted it. The negative forms (*Calemes*, *Fesapo*, *Fresinon*) can be reduced to the first figure by means of Kant's rules, but only in a convoluted and 'unnatural' way (*Spitzf.*, 2:53). This is because they require immediate inferences to be carried out not on just one, but on both premises.

110 Kant does not make this claim, *pace* David Walford's remark in Immanuel Kant, *Theoretical Philosophy, 1755–1770*, ed. David Walford and Ralf Meerbote, Cambridge 1992, 427n32.

111 *Spitzf.*, 2:53.

112 For instance, in 'Every mind is simple; Everything simple is imperishable; Therefore, some of what is imperishable is a mind', 'I cannot say that some of what is imperishable is a mind *because* it is simple; for it is not the case that something is a mind simply *in virtue of* its being simple' (*Spitzf.*, 2:54, italics added).

113 See Michael Wolff's remarks on Kant's use of the verb "to follow" [*fließen*] in 'Vollkommene

ordinary people retrace the process that the Kantian philosopher employs to justify the validity of syllogisms. Kant highlights this in a series of incidental remarks. For instance, he writes that the ‘power to establish a conclusion [*Schlusskraft*]’ of a mixed syllogism ‘depends upon the tacit addition’ of an ‘immediate inference, *which has to be present if only in thought*’.¹¹⁴

Kant’s psychological claim raises a worry for those who, like him, are concerned with the naturalness of inferential processes. Kant’s concern with naturalness is most apparent when he complains that ‘[t]he mode of inference’ in the fourth figure ‘is highly unnatural and depends upon a large number of intermediate inferences, which have to be supposed to be interpolated’.¹¹⁵ The reductions proposed by Kant for second- and third-figure syllogisms too require the interpolation of immediate inferences. For that reason, one could complain that they are harder and slower to carry out (less *natural*₂ and *natural*₃) than the original syllogisms. This is what Lambert claimed with regard to the example in Section 1.2. Even Feder, who agreed with Kant’s views on how we derive the conclusions of second-, third-, and fourth-figure syllogisms, held that some of them are more natural than the corresponding combinations of immediate inferences and first-figure syllogisms.¹¹⁶ If we have a disposition to make easier and faster inferences, rather than more complex and slower ones, we are more likely to infer the conclusions of second-, third-, or fourth-figure syllogisms directly from their premises than to employ Kant’s reduction procedure.

Presumably, Kant held that his favoured reduction procedure can be applied easily and quickly enough not to raise any concerns about unnaturalness. He states that his procedure lacks the ‘futile tediousness’ of other procedures. He claims that, given the conclusion and the middle term, one can employ his favoured reductions ‘instantly’.¹¹⁷ Yet, as Lambert might reply, whether the reduction outlined in Section 1.2 is performed instantly is by no means uncontroversial.

In this section, we have seen that the *False Subtlety* portrays syllogisms as tools for justification, as opposed to invention. Kant does not provide any reasons for disregarding invention. He puts forward two principles of syllogisms which are original, if compared with those proposed by his peers, even though formulating new principles of syllogisms was itself a conventional move. Kant’s principles directly apply to first-figure syllogisms. They ground other syllogisms in virtue of their reducibility to the first figure. Kant’s emphasis on a specific kind of reduction, carried out through immediate inferences and first-figure syllogisms, is rather original. However, Kant does not explain why we should only rely on reductions, as opposed to the method of principles, in order to ground the validity of syllogisms. He does not provide any clear, persuasive reasons for dismissing the syllogistic forms that, in his view, do not suit his reductive strategy (*Bamalip* and *Dimatis*). His claims on the psychological primacy of the first figure and

Syllogismen und reine Vernunftschlüsse: Aristoteles und Kant’, 367.

114 *Spitzf.*, 2:51, italics added. On second-figure syllogisms, see 2:52: ‘[t]his conversion must [...] be tacitly [*geheim*] thought in making the inference, for otherwise my propositions do not conclude [*schließen*]’ (trans. modified). I set aside the issue of what, exactly, “schließen” may mean in this sentence. On fourth-figure syllogisms, see 2:53: ‘[t]he negative syllogism in this figure, the form in which it must be really thought, takes the following form: [...]’.

115 *Spitzf.*, 2:53.

116 Feder, *Logik und Metaphysik*, § 45.

117 *Spitzf.*, 2:58.

on the employment of syllogistic reductions raise worries about their naturalness, which Kant does not address. In conclusion, the *False Subtlety* does not provide sufficient justification for Kant's silence on whether syllogisms can aid invention, the primacy that he assigns to the first figure, and his choice of privileging the reductive method, while disregarding the method of principles.

3 *The False Subtlety, Kant's Immediate Predecessors, and Kant's Works from 1762–1764*

One might hope to explain Kant's silence on whether syllogisms can aid invention, the primacy that he assigned to the first figure, and his choice of privileging the reductive method by looking at the works of his peers and immediate predecessors. Kant might have followed some of them closely, implicitly accepting their justification for certain views. If he strongly opposed other authors, this opposition might help explain why he took certain stances. Alternatively, one might seek an explanation for Kant's views on syllogism by looking at the doctrines that he endorsed in his other works from the early 1760s. This section examines the relation between Kant's views in the *False Subtlety*, those of his immediate predecessors, and the doctrines outlined in Kant's other works from 1762–1764.

3.1 *The False Subtlety and Kant's Immediate Predecessors*

Traditionally, Kant's pre-Critical works have been read in the light of a familiar developmental story. Before becoming a Critical philosopher, Kant is said to have been first a Leibniz-Wolffian rationalist and, later, a Lockean or Humean empiricist.¹¹⁸ It is tempting to interpret the *False Subtlety* in the light of this evolutionary schema, focusing especially on its relation to Leibniz and Wolff. The *False Subtlety* has been said to be influenced by Leibniz, Wolff, or opposed to their views.

Contrary to Silvestro Marcucci's suggestion, the *False Subtlety* makes no explicit effort to criticize 'Leibniz's syllogistic logic'.¹¹⁹ Leibniz is not mentioned in the *False Subtlety* and was not often mentioned in discussions of syllogism by Wolff, Crusius, Reimarus, and Kant's other contemporaries or immediate predecessors. Adolfo León Gómez holds that, nevertheless, Leibniz influenced Kant's views both (a) directly, through his reading of the *New Essays*, and (b) indirectly, through Wolff's influence.¹²⁰ We can safely rule out (a), at least with regard to the *False Subtlety*, because it was published in 1762, three years before the *New Essays*. As for (b), there are two reasons to doubt that Leibniz's views on the foundation of syllogism influenced Kant via Wolff. First, Leibniz does not figure prominently in Wolff's discussions of syllogism.¹²¹ Second, the distinctive, 'contra-traditional'¹²² aspect of Leibniz's discussion of

118 An influential version of this account can be found in Friedrich Paulsen, *Versuch einer Entwicklungsgeschichte der Kantischen Erkenntnisstheorie*, Leipzig 1875.

119 Marcucci, 'Introduzione', 17.

120 Gómez, 'La silogística en Leibniz y Kant, y su parentesco', 43.

121 Nevertheless, see Sgarbi, *Logica e metafisica nel Kant precritico*, 192 for a likely Leibnizian influence on Wolff's views on syllogism.

122 Rescher, *Galen and the Syllogism*, 43.

syllogism in the *New Essays* is his preference for indirect reductions, which employ *reductio ad absurdum*. In the *False Subtlety*, Kant puts forward a different strategy, based on immediate inferences. He does not mention or criticize Leibniz's strategy.¹²³

According to Michael Wolff, Kant's claim that only first-figure syllogisms are pure is directed against Christian Wolff's view that syllogisms of all figures are pure.¹²⁴ However, as we saw in Section 1, Wolff too gave pride of place to the first figure. Like Kant, he claimed that 'the inferences that take place in the second and third figure can be accepted as valid only because it is possible to reduce them to the first figure'.¹²⁵ Wolff and Kant also agreed that the first figure is the most natural, that people privilege it in their ordinary reasoning, and that any other syllogisms should be accepted because they can be reduced to the first figure.¹²⁶

Rather than to Wolff's views, Kant's views on syllogism are opposed to those of Crusius, who held that logic should discuss all four figures and that we sometimes reason more quickly and easily (hence, more naturally) by employing second-, third-, and fourth-figure syllogisms than first-figure syllogisms. However, Kant does not outline his views on the foundations of syllogistic inference by contrasting them with Crusius' views. He criticizes him only in passing, for his discussion of the fourth figure.¹²⁷ This is surprising, given that Kant was keen to criticize Crusius whenever he had a chance in the early 1760s.¹²⁸ Moreover, Kant's views are as far from Crusius' as they are from those of the Wolffian Martin Knutzen, who privileged the method of principles and dismissed syllogistic reductions as useless. Hence, it would be wrong to read the *False Subtlety* through the lens of the dichotomy of Wolffianism and anti-Wolffianism.

In his other works from the 1760s, Kant outlines several doctrines by criticizing other authors. For instance, he introduces his theory of existence by contrasting it with Baumgarten's, Wolff's, and Crusius' theories.¹²⁹ He develops his account of the principles of metaphysics by engaging with Crusius' account.¹³⁰ By contrast, the *False Subtlety* does not contain any explicit, extended engagement with the views of other authors. References not only to Crusius, but also to any other authors are scarce and sometimes imprecise. Kant unfairly classifies all earlier logicians as upholders of the view that all four figures are on a par. He mistakenly claims that they all endorsed the *dictum*, even though the texts he had read, like Reimarus' *Vernunftlehre*, prove otherwise.¹³¹

123 Gottfried Wilhelm Leibniz, *Nouveaux Essais sur l'entendement humain par l'auteur du système de l'harmonie préétablie*, in *Sämtliche Schriften und Briefe*, Berlin 1962 [1704–1705], 6th series, vol. 6; trans. *New Essays on Human Understanding*, ed. Peter Remnant and Jonathan Bennett, Cambridge 1981, Part 4, Ch. 2. Kant's wariness toward indirect proofs influenced his late discussions of syllogism. See Capozzi, 'Osservazioni sulla riduzione delle figure sillogistiche in Kant', 96–98.

124 Wolff, 'Vollkommene Syllogismen und reine Vernunftschlüsse', 354–355.

125 Wolff, *Ausführliche Nachricht von seinen eigenen Schriften*, § 201.

126 There are also some differences between Wolff's and Kant's views on syllogism. Wolff disregards the fourth figure. Kant discusses it explicitly, if only to dismiss it. Wolff states and Kant denies that immediate inferences are enthymematic syllogisms.

127 *Spitzf.*, 2:54n, 2:55. Kant also alludes to Crusius in a passage on judgements, not syllogisms (2:61).

128 See, e.g., *Beweisgrund*, 2:76; *Deutl.*, 2:169, 295; *M. Herder*, 28:10.

129 *Beweisgrund*, 2:72–73.

130 *Deutl.*, 2:293–296.

131 *Spitzf.*, 2:49.

All this indicates, first, that the *False Subtlety* is not mainly the result of Kant's endorsement of the views of his immediate predecessors. Despite some affinities with the views of Wolff and others,¹³² the principles of syllogisms and the reduction strategy that the *False Subtlety* puts forward are not found among Kant's immediate predecessors. Second, the *False Subtlety* is not mainly the result of Kant's polemical engagement with the views of specific authors. We cannot explain Kant's silence on whether syllogisms can aid invention, the primacy that he assigned to the first figure, and his choice of privileging the reductive method by looking at the relation between his views and those of his peers.

3.2 *The False Subtlety and Kant's Works from the Early 1760s*

Kant's texts from the early 1760s do not provide solid reasons for his focus on syllogism as a tool for justification, his focus on the first figure, and his employment of the reductive method. However, they allow us to see why Kant found these choices attractive. This is because they fit in closely with the theory of the method of metaphysics that Kant developed in his other works from 1762–1764, especially the *Inquiry into the Distinctness of the Principles of Natural Theology and Morality*.

Kant's concern with the method of metaphysics in the early 1760s derives from his bleak assessment of the status of philosophy in general and metaphysics in particular. 'Claims to philosophical cognition generally enjoy the fate of opinions and are like the meteors, the brilliance of which is no guarantee of their endurance'.¹³³ Metaphysics is a 'dark and shoreless ocean' and all attempts to develop metaphysical systems had failed.¹³⁴ In Kant's eyes, the failure of Wolff's metaphysics depends largely on his employment of a mathematical method.¹³⁵ Conversely, Kant's hopes of success in this discipline rely on his belief that he had identified the true method of metaphysics.¹³⁶

The method advocated by Kant is based on intuition and conceptual analysis. Metaphysical inquiries address questions such as what time is and whether bodies are made up of simple substances.¹³⁷ The concepts of the objects of metaphysics, such as those of time and body, are given to us before we raise those questions, but only 'confusedly or in an insufficiently determinate fashion'.¹³⁸ To answer a metaphysical question, we should analyse the relevant concepts

in all kinds of relation [...]: different marks which have been abstracted have to be combined together to see whether they yield an adequate concept; they have to be collated with each other to see whether one mark does not partly include another within itself.¹³⁹

In doing so, we should bear in mind that not all concepts can be analysed. Some are

132 See fn. 93 above.

133 *Deutl.*, 2:283.

134 *Beweisgrund*, 2:66. See *Deutl.*, 2:283.

135 *Beweisgrund*, 2:71; *Größen*, 2:167; *Deutl.*, 283.

136 Kant claims that Newtonian physics owes its success to its method (*Deutl.*, 2:275). Kant takes himself to be applying Newton's method to metaphysics (*Deutl.*, 2:286).

137 *Deutl.*, 2:279, 283–284.

138 *Deutl.*, 2:276.

139 *Deutl.*, 2:277.

unanalysable because they have no marks, others because our cognitive limits prevent us from identifying them.¹⁴⁰

Given an analysable concept, we should identify its immediate and mediate marks. This process unfolds through acts of judgement, because ‘a *distinct* concept [that is, a concept of which we can enumerate some marks] is possible only by means of a *judgement*’.¹⁴¹ Every true judgement that identifies a mark_c of a concept (and the corresponding mark_p of the things that fall under that concept) is true in virtue of the law of identity: ‘to every subject there belongs a predicate which is identical with it’.¹⁴² Every true judgement that denies a mark of a concept is true in virtue of the law of contradiction: ‘to no subject does there belong a predicate which contradicts it’.¹⁴³

As we saw in Section 2.1, marks are either mediate or immediate. According to Kant, we become aware that an immediate mark is part of the content of a concept through an act of intuition. Intuition makes us aware of an ‘identity’ or ‘contradiction’ that ‘is to be found immediately in the concepts’ and ‘cannot or may not be understood through analysis by means of intermediate marks’.¹⁴⁴

The belonging of a mediate mark *B* to a concept *a* is not revealed by intuition. It must be established through a syllogism. We must look for a mark of *a* of which *B* is in turn a mark, so that we can apply the *nota notae* principle: ‘A *mark of a mark is a mark of the thing itself*’.¹⁴⁵ For instance, in order to establish that divisibility is a mark of bodies, we can employ the intermediate mark “compound”. The judgements “bodies are compound” and “what is compound is divisible” ascribe immediate marks to their subjects and we can be intuitively aware of their truth. They provide the premises of a first-figure syllogism whose conclusion is “bodies are divisible”.¹⁴⁶

The cognitions that we establish in this way are to be organized in a system. Intuition warrants the truth of its basic or, in Kant’s terms, indemonstrable propositions. Syllogisms warrant the truth of demonstrable propositions, which we deduce from indemonstrable propositions and previously proven propositions. The *nota notae* and *repugnans notae* principles ensure the validity of the syllogisms employed. The ensuing metaphysical system aims to represent the basic structure of the world. ‘To use the terminology of school-philosophers, at that time’ Kant conceived of the world itself as ‘a system of species and genera, subordinated to one another according to the law of identity’.¹⁴⁷

Kant’s account of syllogism in the *False Subtlety* is in keeping with the functions that he assigns to syllogisms within the method of metaphysics. To begin with, Kant holds that we derive metaphysical truths by analysing concepts that are ‘given’ to us ‘confusedly’.¹⁴⁸ Syllogisms must justify those truths by deducing them from

140 *Deutl.*, 2:280.

141 *Spitzf.*, 2:58.

142 *Deutl.*, 2:294; see *Spitzf.*, 2:60; *M. Herder*, 28:8.

143 *Deutl.*, 2:294; see *Spitzf.*, 2:60; *M. Herder*, 28:8.

144 *Deutl.*, 2:294.

145 *Spitzf.*, 2:49.

146 *Deutl.*, 2:294. As Adickes noted, the Critical Kant will regard “bodies are divisible” as a synthetic judgment. See Adickes, ‘Beiträge zur Entwicklungsgeschichte der Kantischen Erkenntnistheorie’, in his *Kant-Studien*, Kiel 1895, 1–164, 85.

147 Giorgio Tonelli, ‘Die Umwälzung von 1769 bei Kant’, *Kant-Studien*, 54 (1963), 369–375, 370.

148 *Deutl.*, 2:276.

indemonstrable propositions and from previously proven propositions. Accordingly, the *False Subtlety* portrays syllogism as a tool for justification, not for invention.

In the second place, Kant's method of metaphysics employs syllogisms to justify the ascription or denial of mediate marks to things, based on the ascription or denial of immediate marks to them. The two principles introduced in the *False Subtlety*, the *nota notae* and *repugnans notae* principles, spell out the rationale of these ascriptions more clearly than the *dictum*. The syllogisms which are used for these ascriptions are first-figure syllogisms.

To be sure, second-, third-, and fourth-figure syllogisms may be helpful for Kant's purposes. As Lambert would note in his *New Organon*, one can employ the second figure to 'prove differences between things, the third' to 'prove examples and exceptions', and 'the fourth' to 'rule out' relations between species and kinds.¹⁴⁹ All of these actions can be useful to build the kind of metaphysical system that Kant was contemplating in the early 1760s. Nevertheless, Kant's method of metaphysics focuses on the identification of relations of inclusion and exclusion between concepts, which are established through first-figure syllogisms. Their central role within Kant's theory of metaphysics parallels the pride of place that they have within the *False Subtlety*.

Finally, Kant's foundation of the second, third, and fourth figure through a reductive method fits in nicely with the architectonic structure of his philosophy. If Kant had followed the method of principles, he would have identified numerous principles, which he would have employed to reduce the number of valid syllogistic forms from 256 to 19. By following the reductive method, Kant can put forward just two principles of all syllogisms, which parallel the principles of judgements. On the one hand, Kant admits two principles of true judgements, the laws of identity and contradiction. He claims that all truths depend on them. He relates them respectively to affirmative and negative truths. On the other hand, Kant admits two principles of valid syllogisms, the *nota notae* and *repugnans notae* principles. He claims that the validity of all syllogisms depends on them. He relates them respectively to affirmative and negative syllogisms.

It is well known that Kant paid much attention to architectonic considerations, as the structure of his Critical works makes apparent. Architectonic considerations alone cannot warrant Kant's claims on the principles of syllogisms. Nevertheless, they explain why Kant found it attractive to claim that all valid syllogistic forms are grounded on the *nota notae* and *repugnans notae* principles.

We have seen that Kant's theory of the method of metaphysics fits in closely with his focus on syllogism as a tool for justification, on the first figure, and his employment of the reductive method. There are two reasons why this fit helps explain Kant's views on syllogism. To begin with, Kant held that identifying the method of metaphysics is crucial for its success. Kant wrote in 1763 that he had meditated on this topic for years.¹⁵⁰ Although he was duty-bound to teach logic semester after semester, Kant did not think that the theory of syllogism was nearly as important as the methodology of metaphysics. He took the doctrine of moods and figures to be useless¹⁵¹ and he called

149 Lambert, *Neues Organon*, vol. 1, 140–141, see 142–143, echoed in Feder, *Logik und Metaphysik*, § 45.

150 Letter to Johann Heinrich Samuel Formey of 28 June 1763, 10:41.

151 *Spitzf.*, 2:56.

the *False Subtlety* ‘the labour of a few hours’.¹⁵² It is understandable that his views in an occasional work on a topic of secondary importance were influenced by the ideas which he was spending much time and many efforts on.

Moreover, it is well known that the Critical Kant was keen to map central notions and distinctions of his epistemology-*cum*-metaphysics onto formal-logical notions and distinctions. This tendency is not confined to Kant’s Critical works. In the early 1760s, Kant draws several parallels between logical and metaphysical notions: logical ground and real ground,¹⁵³ logical opposition and real opposition,¹⁵⁴ logical necessity and real necessity,¹⁵⁵ formal principles and material principles.¹⁵⁶ Kant’s endorsement of a doctrine of syllogism that reflects its role within metaphysics is yet another expression of his tendency to relate formal-logical views to epistemological and metaphysical views.

This chapter has examined the relation of the *False Subtlety* with its intellectual context, including the works of Kant’s immediate predecessors and Kant’s other works from the early 1760s. This examination supports two conclusions. First, the *False Subtlety* is a moderately original work. The principles of syllogisms and the reduction strategy that Kant puts forward are original with respect to his intellectual context. However, the *False Subtlety* is far from displaying the level of innovation and autonomy from Kant’s cultural environment that can be found in his later, Critical works. Kant’s choice of putting forward new principles of syllogism was a rather conventional one, having been pursued by Crusius, Daries, Meier and Reimarus, among others. His claims on the primacy and naturalness of the first figure recall similar claims by Wolff. At any rate, the *False Subtlety* was not mainly the result of Kant’s endorsement or rejection of the views of his predecessors.

Second, the *False Subtlety* has some puzzling features, for which Kant provides little or no reason. These are his focus on syllogism as a tool for justification, his focus on the first figure, and his employment of the reductive method for the foundation of syllogisms. These features of the *False Subtlety* can be explained by considering the relation between Kant’s logical and metaphysical views. Kant endorses a view of syllogism that is in line with, and influenced by, his conception of the method of metaphysics. Thus, the study of the *False Subtlety* confirms the importance of reading Kant’s formal logic and his epistemology-*cum*-metaphysics in the light of one another.

152 *Spitzf.*, 2:57.

153 *Größen*, 2:202.

154 *Größen*, 2:171.

155 *Beweisgrund*, 2:82.

156 *Deutl.*, 2:294–296.