**Transcendental Paralogisms as Formal Fallacies**

**– Kant’s Refutation of Pure Rational Psychology**[[1]](#footnote-1)

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According to Kant, the arguments of rational psychology, designed to establish metaphysical tenets about the thinking self or the soul, are in fact formal fallacies that he calls transcendentalparalogisms*.* A plethora of difficult interpretative problems haunt the Paralogisms chapter that exposes and analyses these fallacies. Two principal lines of interpretation stand particularly far apart, as they disagree even on whether the paralogisms really commit any formal error to begin with. According to Michelle Grier and Henry Allison, the transcendental paralogisms are deductively invalid syllogisms, whereas Jonathan Bennett, Karl Ameriks, and James Van Cleve deny that they are formal fallacies at all.[[2]](#footnote-2)

I believe this fundamental divide stems from a misunderstanding of what transcendental paralogisms are, and that a clear definition can reconcile the two extremes. I focus on Kant’s neglected distinction between *logical* and *transcendental* paralogism: whereas the former “consists in the falsity of a syllogism as to form”, the latter has a specifically “transcendental ground for inferring falsely as to form” (A341/B399, translation amended[[3]](#footnote-3), [[4]](#footnote-4)). Although this distinction is introduced in the very beginning of the Paralogisms, only Grier and Allison acknowledge it, and they too continue to treat transcendental paralogisms as (a species of) *logical* paralogisms.

I propose a mediating view according to which transcendental paralogisms are (deductively) valid and sound syllogisms in *general logic* yet formal fallacies in *transcendental logic*. Unlike general logic that analyses concepts in abstraction from their objects, Kant’s transcendental logic specifically investigates the logical form of objects, abstracting only from their empirical content. The specific fallacy of equivocation (*sophisma figurae dictionis*) of transcendental paralogisms is, I submit, unique to transcendental logic: while a regular equivocation conflates *different concepts*, transcendental paralogisms conflate a *concept* with its possible *object*. Since general logic abstracts from objects, such an error cannot be detected in it. Still the transcendental paralogism *does* constitute a formal fallacy, one that can be exposed only with the resources of transcendental logic. This explains also why Kant’s predecessors were oblivious to the fallacy, as they had no conception of transcendental logic.

I start by presenting Kant’s theory of syllogisms and his distinction between formal and material fallacies. In section 2 I will show that transcendental logic – although contrasted with formal (general) logic – also involves formal fallacies of its own. In section 3 I will show that transcendental paralogisms are neither deductively invalid fallacies of general logic nor formally flawless inferences. I advance a novel interpretation of the “transcendental ground for inferring falsely” as an illegitimate existential presupposition that neglects the laws of transcendental logic. While the inferences of rational psychology are sound in general logic, they succeed in determining merely the *concept* of soul (how we must *think* ourselves). But the rationalist covets *metaphysical* knowledge of the *object*, the soul itself (how we thinkers must *exist*). Yet in such use the inferences are transcendental fallacies. In section 4 I will formalise the transcendental paralogism in order to make its fallacy explicit. I will conclude with a discussion of how this interpretation transforms the way we ought to read Kant’s critique of rational psychology. Note that I seek only to expose the invalidity in the paralogistic inferences: I present neither an interpretation of *why* the rationalist would commit the fallacy (i.e., transcendental illusion) nor an analysis of Kant’s refutation of the so-called broadly rationalistic psychology that relies on tools beyond mere rationalistic inferences (see sections 2.3 & 3.1).

**1 – Formal and Material Fallacy**

A syllogism or an inference of reason consists of three judgments: the major and minor premises and a conclusion. The major premise expresses a rule and the minor premise subsumes something under (the condition of) this rule. The conclusion is a judgment that is thereby derived with necessity from the premises. (JL, AA 9:120–1; A303–4/B360–1, A330/B386–7.)

The alleged paralogisms of rational psychology are specifically categorical syllogisms (A323/B379, A334–5/B391–2, A339–40/B397–8), i.e. their major premise is a judgment of the form “A is B”, where *A* is the subject and *B* the predicate term. The minor premise has the form “C is A”. From these two premises the conclusion “C is B” is derived.[[5]](#footnote-5) *B* is called the *major* and *C* the *minor term*. The term *A* that is common to both premises is called the *middle term* or *concept* (*medius terminus*, *Mittelbegriff*), since it mediates the two premises, or “because through it a cognition [C] is subsumed under the condition [A] of the rule [A is B]” (JL, AA 9:123).

Since syllogisms have two premises that both contain two terms, of which the middle term is common to both, a categorical syllogism must contain exactly three terms (JL, AA 9:124) – otherwise it is a fallacy. For example, the major premise “All humans are mortal” connects two terms, the middle term “human” and the major term “mortal”. The minor premise “Socrates is human” subsumes the minor term “Socrates” under the middle term. In the conclusion the minor term is connected with the major term so that “Socrates is mortal” is inferred.

*1.1. Form and Matter of Syllogisms*

According to existing interpretations, Kant’s claim that transcendental paralogisms are formal fallacies means that they are *deductively invalid* in formal logic.[[6]](#footnote-6) But Kant does not operate with the contemporary distinction between formal and material fallacies – indeed, in contemporary classification a fallacy of equivocation is *material*. Although Kant himself says little about this distinction, we find express definitions e.g. in G. F. Meier’s *Auszug aus der Vernunftlehre* (1752a) – the textbook on which Kant based his lectures on logic. According to Meier, a fallacy (*Betrugschluß*) is an “inference of reason, which is false in the form” (Meier 1752a, §402). For him “[t]he matter of the inference of reason (*ratiocinii materia*) consists in its premises, its form however (*ratiocinii forma*) in the derivation of the conclusion from the premises” (Meier 1752a, §359).[[7]](#footnote-7) Meier then proceeds to “define a true inference of reason through an inference of reason that is correct both in the matter and in the form” (Meier 1752b, §396; see also 1752a, §360). Since the premises constitute its matter, a syllogism can be a (merely) formal fallacy only if its premises are true.

In his lectures Kant follows Meier almost *verbatim*: a formal fallacy is an “inference of reason that is false [*falsch*] as to form” (JL, AA 9:134; translation modified). Kant distinguishes between form and matter of inferences similarly to Meier e.g. in the *Logik Busolt* from 1790:

Sophism is a dialectical mode of inference that has merely the illusion of truth. The illusion can lie

In the matter, i.e. in the premises or in the propositions themselves, or

In the form, i.e. when the illusion lies in the conclusion (in the mode of inference). (LB, AA 24:680; see also JL, AA 9:121.)[[8]](#footnote-8), [[9]](#footnote-9)

For Kant too, then, a formal fallacy is an inference in which the form of the syllogism is false (i.e. invalid), whereas the “truth or falsity of a syllogism in the matter concerns the truth or falsity in the premises” (LP, AA 24:472).[[10]](#footnote-10) In a formal fallacy the inference is false or invalid in that the conclusion may be false even when the premises are true.[[11]](#footnote-11)

What is more, Meier identifies two ways of rejecting an interlocutor’s proof: to show that “the opponent has committed an error either in the matter or in the form of his proof” (Meier 1752a, §516). The latter demands that the opponent “change his inference”, the former that he “prove the premises” (*ibid.*). Not only does Meier thus attribute material fallacies to false premises, he also states that a rejection of proof can be directed either at the premises (matter) or at the inferential form. It is significant, then, that Kant commences his critique of the rational psychologists by making it explicit that he targets the form, not the matter (premises), of their proofs.

Kant’s claim that transcendental paralogisms are formal rather than material fallacies thus mirrors his frequent claim that their *premises are true* (e.g. A402; see also Proops 2010, 470). Beyond this, it is not yet decided what kind of formal fallacy they commit. Hence, *pace* all interpretations known to me,[[12]](#footnote-12) when Kant claims that transcendental paralogisms are “false as to form”, it does not on its own imply that he takes – whether correctly (Allison, Grier) or incorrectly (Ameriks, Bennett, Van Cleve) – them to be formal fallacies in the contemporary sense, i.e. *deductively invalid inferences* (in general logic). To my mind one should not place emphasis on transcendental paralogisms being formal rather than material fallacies – for this does not distinguish them from the *logical* paralogisms with which they are contrasted – but on them being *transcendental* rather than *logical* fallacies.[[13]](#footnote-13)

*1.2. The* sophisma figurae dictionis

According to Kant, the conclusion of the syllogism that exhibits the procedure of rational psychology “is drawn *per sophisma figurae dictionis* [sophism of a figure of speech], hence through a fallacy” (B411, translation modified; see also A402). The *sophisma figurae dictionis*, also known as *fallacy of equivocation*, is a formal fallacy in which “the *medius terminus* is taken in different meanings” (JL, AA 9:135). In general logic this equivocation occurs when the same *word* that is used in both instances of the middle term expresses two different *concepts*, whereby the middle term cannot mediate the premises.[[14]](#footnote-14) For example:

**Major premise**: Whatever is light cannot be dark

**Minor premise**: A feather is light

**Conclusion**: A feather cannot be dark

Here the word “light” is used in two different senses, expressing two different concepts. If we make the equivocation explicit by changing the word-expression, e.g. by distinguishing between the concepts *light in colour* and *light in weight*, we get an obviously invalid syllogism of four terms:

**Major**: Whatever is light in colour cannot be dark

**Minor**: A feather is light in weight

**Conclusion**: A feather cannot be dark

As Grier and Allison point out, since an inference committing this kind of fallacy of equivocation has four rather than three terms,[[15]](#footnote-15) it is a species of the formal fallacy of four terms (*quaternio terminorum*). This is indeed how the fallacy of equivocation has traditionally been analysed, e.g. in the *Port-Royal Logic* from 1662:

This sophism [the fallacy of abusing the ambiguity of words] is committed in several ways. All syllogisms invalid because of containing four terms are arguments that commit this fallacy. [This is the case e.g.] if the middle term is taken in one sense in the major premiss and in another sense in the minor premiss; or […] if the minor term or the major term is taken in a different sense in the conclusion than in the premisses. (PRL 262–3.)

Grier’s and Allison’s claim that the transcendental paralogism is a deductively invalid four-term syllogism is motivated by this traditional analysis – and if it were invalid in general logic, their claim would hold. But as I will show, the fallacy of four terms fails to capture the kind of equivocation that grounds the paralogistic inferences of rational psychology. Indeed, since Kant specifically contrasts the transcendental paralogism with a logical one in the opening paragraph of the Paralogisms, it seems reasonable to investigate whether the former would involve a different kind of equivocation:

[a] logical paralogism consists in the falsity of a syllogism as to form, be its content otherwise what it may.[[16]](#footnote-16) A transcendental paralogism, however [*aber*], has a transcendental ground for inferring falsely as to form. (A341/B399, translation amended.)

Since logical and transcendental paralogisms are both fallacies of equivocation, I distinguish between *logical* and *transcendental* equivocation. These denote an equivocation of the middle term in *general* and in *transcendental logic*, respectively. Only the former equates strictly speaking two concepts, while the latter equivocates a concept with its purported object. In what follows I will show that the transcendental ground underlying the transcendental paralogism involves such a transcendental equivocation.

**2 – Transcendental Logic and Formal Fallacy**

According to Kant, logic is “the science of the rules of the understanding in general” (A52/B76). In its most general sense, logic “contains the absolutely necessary rules of thinking, without which no use of the understanding takes place” (*ibid.*). It therefore does not consider “the difference of the objects to which it may be directed” (*ibid.*) but rather “abstract[s] […] from all objects of cognition” (Bix) or “from any relation of [cognition] to the object” (A55/B79). On this account Kant’s logic is commonly called *formal*.[[17]](#footnote-17) Although Kant does speak of “formal logic” (A131/B170), it is striking that – to my knowledge – this exact expression appears *only once* in his entire corpus.[[18]](#footnote-18) To call Kant’s logic “formal” without further elaboration can thus be very misleading.[[19]](#footnote-19), [[20]](#footnote-20) The expression must be understood against the backdrop of Kant’s highly context-dependent distinction between matter and form.

*2.1. Matter and Form*

The matter/form distinction permeates Kant’s philosophy: matter and form are “two concepts that ground all other reflection” and are “bound up with every use of the understanding” (A266/B322). Matter “signifies the determinable in general” and form “its determination” (*ibid.*). Béatrice Longuenesse connects the concept pair to thinking in general: “All thinking is an activity of *determining* (giving *form* to) a *determinable* (*matter*).” (Longuenesse 1998, 148.) Every representation involves *that which is represented* (matter) and the *way in which* that something is represented (form). This is why matter and form appear throughout Kant’s philosophy in various contexts, relative to different species of representation and faculty.[[21]](#footnote-21) Thus it must in the very least be asked: With regard to *which* form is general logic formal?

General logic is formal because as an exposition of the rules of the understanding or of *thinking in general* it “has to do with nothing but the mere form of thinking” (A54/B78).[[22]](#footnote-22) Thus it abstracts from the *matter* or *content* of thinking.[[23]](#footnote-23) The “matter of concepts is the *object*” (JL, AA 9:91), and according to Kant general logic “abstracts from all real or objective difference of cognition” and cannot therefore “occupy itself […] with the content of concepts” (JL, AA 9:101).

Apart from general logic, there are also particular or special (*besondere*) logics that, unlike general logic, “contain[] the rules for correctly thinking about a certain kind of objects” (A52/B76). These special logics include transcendental logic that does not “abstract from all content of cognition” (A55–6/B79–80) but from “all those cognitions that [are] of empirical content” (A56/B80).[[24]](#footnote-24) It is, in a sense, the most general of the special logics, concerning objects in the most abstract way: in it “the object itself is represented as an object of the mere understanding” (JL, AA 9:15). While general logic abstracts from all objects, transcendental logic distinguishes between *pure* and *empirical* objects and abstracts only from the latter, i.e. from the given content of objects. Whereas general logic expounds the necessary rules of *thinking in general*, irrespective of *what* is thought, transcendental logic expounds the necessary rules of specifically *objective thinking*: “the principles without which no object can be thought at all” (A62/B87). It is, in a word, a *logic of objectivity*. As Michael Wolff notes, it is thereby also *the special logic of metaphysics* (Wolff 1995, 210, 241).[[25]](#footnote-25)

*2.2. The Concept of an Object*

Kant’s notoriously ambiguous use of the term “object” complicates matters and needs to be addressed. For despite abstracting from objects, general logic according to Kant nonetheless “deals with all objects in general” (JL, AA 9:15; see also A57/B82). To avoid contradiction, general logic must not be taken as something that *would not apply to* objects, but as something that by abstracting from everything that belongs to these objects abstains from *saying anything about* them specifically as objects – just as mathematics applies to concrete objects like mugs and people yet abstracts from their concreteness so as to focus on their pure quantity. The rules of general logic, in virtue of applying to all thinking whatsoever, must also apply to the corresponding *objects* of every thought – if any.

For Kant, in its most abstract sense, the term “object” denotes *what is thought*, i.e. *any* object of thought. As explained in the *Metaphysik Mrongovius*, this sense is so wide that it includes even *impossible* objects: an “object can also be thought with impossible predicates” (MMron, AA 29:811). Since an object in general can be possible or impossible, “object [… is] the highest concept in ontology” (*ibid.*; see also MVig, AA 29:960–1). For something to be an “object of thinking” or a merely “*logical* something” it is only required that it does “not contradict itself” and is therefore “logically possible” (ML2, AA 28:544). It is in this sense of *logical object* that general logic deals with all objects in general, whether possible or impossible, actual or imagined, etc. An object is a logical object in general if and only if its *concept* is not self-contradictory, i.e. is thinkable.

Typically, however, when Kant speaks of objects, he means them “in the metaphysical” or “in the real sense” (ML2, AA 28:555; see also MMron, AA 29:811). These are *possibly existing objects*, i.e. objects whose concepts are not only non-self-contradictory but also have *objective reality* (ML2, AA 28:544).[[26]](#footnote-26) Transcendental logic is a logic of objectivity or a logic of objective thinking in the real sense of object as a possibly existing thing – not in the logical sense in which every non-self-contradictory thought has an object simply in virtue of being *about something*. Kant repeatedly warns us not to “infer immediately from the possibility of the concept (logical possibility) to the possibility of the thing (real possibility)” (A596/B624n; see also A244/B302).

Figure I: Species of Objects



*2.3. Formality of Transcendental Logic*

Kant contrasts transcendental logic with general logic because *as a* *science of thinking* (i.e., as a logic) it does not concern the form of thinking alone and is therefore not a formal *logic*. Yet, transcendental logic is nonetheless a formal *science* of another kind, namely of the “merely formal principles of the understanding” (A63/B87), viz. of the categories and the transcendental principles of the understanding that apply them. As Wolff notes, “all logical rules are formal in some respect and relative to some content” (Wolff 1995, 229). Although transcendental logic does not abstract from all content of *thinking* or *cognition*, it still abstracts specifically from any content given by sensibility: it “separates itself completely not only from everything empirical, but even from all sensibility” (A65/B89). It thus concerns only the *conceptual form* of the objects of cognition, i.e. the way in which we must *think* every possibly existing object (whereas transcendental aesthetic concerns their *sensible form*: how we must *intuit* them).

But transcendental logic alone does not suffice for determining objects. It only determines the *form* of thinking that must pertain to all possibly existing objects, i.e. the necessary conditions of the possibility of *thinking* a real object. These conditions are not *sufficient* for the existence of such objects; the *matter* of cognition must still be *given* elsewhere. For humans, it is given in sensible intuition: “The use of this pure cognition, however, depends on this as its condition: that objects are given to us in intuition, to which it can be applied.” (A62–3/B87.) Hence transcendental logic, too – albeit a logic of objectivity – abstracts from all *actual* objects, for it concerns only *pure* objects of thinking as to their mere conceptual form, whereas all actual objects must have a matter as well. Demonstrating that it is not possible for humans to cognise objects without sensibly given content is one of the main aims of the *Critique of Pure Reason*.[[27]](#footnote-27)

According to Kant, the pure concepts of the understanding – expounded in transcendental logic – constitute the *conceptual form of experience*.[[28]](#footnote-28) This is how he defines the categories: “A concept that expresses this *formal* and *objective* condition of experience universally and sufficiently would be called a pure concept of the understanding.” (A96, my emphasis.) The categories apply to objects because they constitute “the form of thinking of an object in general” (A50/B74–5). Their objective validity “rests on the fact that through them alone is experience possible (as to the form of thinking)” (A93/B126, translation modified). In short, “pure concepts of the understanding […] first make [experience] possible as to form” (A130, translation modified).[[29]](#footnote-29)

The following picture emerges: transcendental logic does not constitute formal *logic*, as it does not investigate the forms of thinking in general, yet it is a formal *science* nonetheless, namely of the conceptual forms of experience and objective thinking.[[30]](#footnote-30) Kant’s definition of transcendental paralogisms as false inferences “as to form” need therefore not be understood in the general-logical sense of form, for it can refer to the categories as conceptual forms of objective thinking – making them fallacies of equivocation in transcendental rather than general logic.

In deciding whether a concept refers to a mere logical object or to a real, possibly existing object it does not suffice to analyse the formal conditions of all thinking (general logic) but the special formal conditions of objective thinking (transcendental logic). The failure to attend to these transcendental-logical rules (the transcendental principles for applying the categories) is “the transcendental ground for inferring falsely as to form” that renders the paralogistic inferences illegitimate and inconclusive.

**3 – The Transcendental Paralogism**

According to Grier and Allison, transcendental paralogisms are special invalid syllogisms of general logic that are grounded in the nature of reason, specifically in transcendental illusion. (See also Proops 2010, 465.) Kant’s apparent equating of “transcendental ground” with a “ground in the nature of human reason” lends credence to their view:

A transcendental paralogism, however, has a transcendental ground for inferring falsely due to its form. Thus a fallacy of this kind will have its ground in the nature of human reason, and will bring with it an unavoidable, although not insoluble, illusion. (A341/B399.)

An alternative interpretation is possible, however, for the two instances of “ground” could denote different grounds. Namely, two conditions must be met for me to commit a fallacy: (1) the inference must be invalid, and (2) I must erroneously take it to be valid: “An inference of reason that is [1] false as to form, although [2] it has for itself the illusion of a correct inference, is called a *fallacy*” (JL, AA 9:134, translation modified).[[31]](#footnote-31) It is plausible that the “transcendental ground” is what makes the paralogism invalid (it violates the rules of transcendental logic). Rather than specifying *this* ground, that the paralogism has “its ground in the nature of reason” would then refer to the second ground: the reason for taking the invalid inference for a valid one (transcendental illusion).[[32]](#footnote-32) That Kant does not explicitly say so might be because he simply omits[[33]](#footnote-33) reiterating here the parallel point about logical paralogisms that he made already earlier in the Dialectic when contrasting logical and transcendental illusion:

Logical illusion, which consists in the mere imitation of the form of reason (the illusion of fallacious inferences), arises solely from a failure of attentiveness to the logical rule. Hence as soon as this attentiveness is focused on the case before us, logical illusion entirely disappears. Transcendental illusion, on the other hand, does not cease even though it is uncovered and its nullity is clearly seen into by transcendental criticism […]. (A296–7/B353–4.)

That an inference does not follow the general-logical rule is the ground for its invalidity, and the ground for nonetheless taking it to be valid is our inattentiveness to this rule. This “artificial illusion” (A298/B354) can be avoided, whereas transcendental paralogisms involve a “*natural* and unavoidable *illusion*” (*ibid.*) due to a special, transcendental ground. It is thus feasible to read the claim that transcendental paralogisms have their “ground in the nature of human reason” (A341/B399) not as their *definition* but as a *further*, illusion-related contrast between them and logical paralogisms. My alternative reading is, then, that the “transcendental ground for inferring falsely” is a transcendentally logical conflation of a concept (of an object) with its possibly existing object – or, equivalently, the same concept with and without (demonstrable) objective reference.

*3. 1. The Syllogism of Rational Psychology*

In the A-edition[[34]](#footnote-34) Paralogisms Kant somewhat hesitantly calls the transcendental paralogism a fallacy of equivocation, and is quick to specify in which sense:

If one wants to give a logical title to the paralogism in the dialectical syllogisms of the rational doctrine of the soul, insofar as they nonetheless have correct premises [i.e. are not material fallacies], then it can count as a *sophisma figurae dictionis*, in which the major premise makes a merely transcendental use of the category, in regard to its condition, but in which the minor premise and the conclusion, in respect of the soul that is subsumed under this condition, make an empirical use of the same category. (A402–3, translation modified.)

Kant’s caution is prudent, for as we have seen, a regular *sophisma figurae dictionis* (of general logic) equivocates two different concepts denoted by the same word, whereas here two *uses* of the *same* concept – “the same category” – are equivocated. Kant’s subsequent explanation underscores this point:

Thus e.g., the concept of substance in the paralogism of simplicity is a pure intellectual concept, which in the absence of conditions of sensible intuition is merely of transcendental use, i.e., of no use at all. But in the minor premise the very same concept is applied to the object of all inner experience, yet without previously establishing it *in concreto* and grounding the condition of its application, namely its persistence; and hence an empirical, though here illegitimate [*unzulässig*], use is being made of it. (A403, translation amended.)

Since the category is “the very same concept” in both premises, the paralogism has three terms and does not – *pace* Grier and Allison – appear to be a fallacy of four terms. As Kant’s explanation shows, by the “use” of a concept he means its application to objects.[[35]](#footnote-35) Only if the concept is the same can its different applications to objects be conflated. If the transcendental paralogism were an ordinary *sophisma figurae dictionis*, the same *word* would denote different *concepts*, but here the *same concept* is used in different ways or has two different relations to possibly existing objects.

In the B-edition Kant says that “in the procedure of rational psychology there is a paralogism that is exhibited through the following syllogism” (B410, translation modified). I will call it the General Syllogism:

**Major premise**: *What cannot be thought otherwise than as subject does not exist otherwise than as subject, and is therefore substance.*

**Minor premise**: *Now a thinking being, considered merely as such, cannot be thought otherwise than as subject.*

**Conclusion**: *Therefore it also exists only as such a being [ein solches], i.e., as substance.* (B410–1, translation amended.)

Kant reiterates that this “conclusion is drawn *per sophisma figurae dictionis*, hence through a fallacy” (B411, translation modified). Unfortunately, what exactly is equivocated here is unclear, as Kant himself offers a wide range of *prima facie* incompatible explanations. As I have shown elsewhere that his various formulations can nonetheless be reconciled, I side-step these interpretative issues here for simplicity and present my reading directly (see Kannisto 2017b: 151–4, and Proops 2010: 471–2).

According to the B-edition, the inference conflates “a being” (B411) or “thing”[[36]](#footnote-36) (B411n) with “thinking” (B411n): while according to Kant the major premise’s “what” refers to “things” (B411n), the minor premise’s “thinking being” – confusingly enough – “talks not about *things*, but about *thinking*” (B411–2n).[[37]](#footnote-37) That the inference conflates a *thought* with a *thing* means that it conflates a *concept* (or, as it may be, an idea) with its *object*. This basic conflation Kant expresses in various, not obviously equivalent ways.

First, the conflation consists in an equivocation of two uses of a concept, either in relation to “a being that can be thought of in every respect” (major premise) or “relative only to thinking […] but not at the same time in relation to the intuition through which it is given as an object of thinking” (B411) (minor premise). Second, in the major premise the concept therefore “applies to an object in general” (B411n), whereas in the minor premise “no object is thought”, as the concept is applied only in “thinking”, which “abstracts from every object” (B411n). (See note 42.) Third, since the relevant “concepts” here are the categories, in A-edition terms the major premise uses the category *transcendentally* to a mere object in general, whereas the minor premise uses it *empirically* to real objects (A403).[[38]](#footnote-38) That the minor premise in the A-edition is applied to objects seems to contradict Kant’s B-edition claim above that it relates to thinking alone, were it not for his qualification that this empirical application isin fact “illegitimate” (A403) – which is to say that the minor premise is precisely justified relative “only to thinking”, not to its possible (real) object.[[39]](#footnote-39)

*3.2. Hypostatisation as a Formal Fallacy of Transcendental Logic*

The conflation of a concept, representation, or an idea with a really existing object Kant calls *hypostatisation* (A384–6, A392, A580/B608). This term – as Grier has shown in detail – stands in the core of Kant’s critique of speculative metaphysics.[[40]](#footnote-40) As it concerns the relationship of a concept to a real object, something general logic abstracts from, hypostatisation is a fallacy in transcendental logic. The major premise of the General Syllogism is true in *general logic*, of a logical object. Since this logical object can fail to be an existing thing and even a *possibly* existing metaphysical or real object, the major premise is true even if there are no or even cannot be things that “cannot be thought otherwise than as subject”.[[41]](#footnote-41) Hence it alone has no bearing on metaphysics, and to assume otherwise is to hypostatise the concept. Kant typically expresses this point by stating that the middle term in the paralogisms lacks demonstrable *objective reality*:

[T]he concept of a thing that can exist for itself as subject but not as a mere predicate carries with it no objective reality at all, i.e., […] one cannot know whether it applies to any object, since one has no insight into the possibility of such a way of existing […]. [T]hus if we stay merely with thinking, we also lack the necessary condition for applying [e.g.] the concept of substance […] to itself as a thinking being[.] (B412–3.)

Now, that the major premise is noncommittal to the existence of the object would not be a problem if the minor premise could establish that there actually *is* such a real object that can only be thought as subject. The conclusion could then follow the stronger and metaphysically pregnant sense of “object”.[[42]](#footnote-42) But the B-edition minor premise fails to establish this, for if it is true at all, it is because it “talks about this [thinking] being only insofar as it is considered as subject […] but not at the same time in relation to the intuition through which it is given as an object for thinking” (B411). And when in the A-edition analysis it is supposed to apply the category empirically to objects, it does so “without previously […] grounding the conditions of its application”, viz. the conditions of its objective reality, and hence through an “illegitimate” (A403) use or hypostatisation of it. Although the rational psychologist *would need* the minor premise to be true of a real object, it can only be shown to be true of the subject and of thought. It therefore cannot determine the *logical* object of the major premise as a real *metaphysical* object.

The inference is not wholly invalid, however. Although “in the conclusion it cannot follow that I cannot *exist* otherwise than as [a referent of the] subject [term]”, it does follow that “in *thinking* *my existence* I can use myself only as the subject [term] of judgment”. But this “is an identical proposition that discloses absolutely nothing about the manner of my *existence*” (B412n, my emphasis).[[43]](#footnote-43) The inference can thus be read in two ways: either it is valid – and sound – in general logic yet (therefore) remains noncommittal to the possible existence of its object, or it reaches a fallacious metaphysical conclusion through the illegitimate assumption in transcendental logic that the object – the I as the object of the idea of soul – does exist. This is why Kant repeatedly states that each proposition of rational psychology is “apodictic” and “must be valid” as “an *identical*” (B407) or “analytic proposition” (B408, B409). As far as *general logic* is concerned, then, the General Syllogism is sound with a necessarily true conclusion (and is indeed not a paralogism). Yet, since general logic abstracts from objects, it does not decide whether the inference is sound about objects – a sound *metaphysical* inference. As Kant summarises:

Thus through the analysis of the consciousness of myself in thinking in general not the least is won in regard to the cognition of myself as object. The logical exposition of thinking in general is falsely held to be a metaphysical determination of the object. (B409.)

**4 – The Transcendental Fallacy in the General Syllogism**

Formalising the General Syllogism in contemporary logic is helpful in exposing the fallacy in the transcendental paralogism with formal rigour. As contemporary logic differs from Kant’s Aristotelian logic and contains tools not available to him, the presentation and analysis of the syllogism must deviate from the letter of Kant’s own diagnosis of its error, though it remains true to its spirit. Note that the formalisation brings out both the *valid* general-logical inference and the *invalid* transcendental-logical one, whereas Kant’s General Syllogism is (purposely) ambiguous between the two.

*4.1. Formalisation of the General Syllogism*

According to Kant, “what cannot be thought” is a contradiction or a logical impossibility, and so the General Syllogism constitutes an indirect proof grounded on the logical impossibility of the negation.[[44]](#footnote-44) By adding the implicit *all*-operator and by reading the “does not exist otherwise” modally stronger as “cannot exist otherwise,” as required by the “only” in the conclusion, the major premise is:[[45]](#footnote-45)

**Major premise**: For all x, if it is not possible that x is not thought as subject, then it is not possible that x exists and is not thought as subject.

 ∀x­­(¬◊(¬Sx) → ¬◊(∃y(y = x) & ¬Sx)).

Also, by definition, if *x* exists and can only be thought as subject, then *x* is substance.[[46]](#footnote-46) By applying the negations we get:

**Major premise**: For all x, if x is necessarily thought as subject, then it is necessary that either x does not exist or x is thought as subject.

 ∀x(□(Sx) → □(¬∃y(y = x) ∨ Sx)).

Since the antecedent logically implies the consequent, the major premise is in fact a tautology and hence also indisputable – which is why Kant can take the rationalists to agree to it even though they never explicitly presented this particular inference. That the major premise is formulated via a negative is crucial, as it makes the consequent a disjunction that leaves it undecided whether *x* exists. As the major premise is true irrespective of whether *x* exists, it corroborates Kant’s claim that it applies categories transcendentally to an object in general – which, as we saw, could even be an impossible object.

The minor premise merely affirms that the soul or a “thinking being” (*s*) cannot be thought otherwise than as subject, that is:

**Minor premise:** It is not possible that a thinking being, considered merely as such,[[47]](#footnote-47) is not thought as subject.

 ¬◊¬Ss.

This is equivalent with:

**Minor premise:** A thinking being, considered merely as such, is necessarily thought as subject.

□Ss.[[48]](#footnote-48)

Kant takes this premise to be true: we can indeed only think ourselves as subjects.[[49]](#footnote-49) Thus, since both premises are true and the minor fulfils the condition of the major, the inference is not only valid but also *sound*, and affords the following conclusion:

**Conclusion:** Necessarily, either the thinking being does not exist or the thinking being is thought as subject.

 □(¬∃y(y = s) ∨ Ss).

Since the inference is deductively valid and sound, whatever fallacy it commits, it is not one of general logic. Yet despite its soundness, the inference nonetheless fails to establish what the rational psychologist covets, for the conclusion is a *disjunction* that does not determine whether the thinking being exists at all. And surely the rational psychologist, a metaphysician rather than a logician, takes the soul or the thinking being to *exist* as substance and not merely to be *thought* as substance. In technical terms, the inference only excludes the possibility that the thinking being exists *yet* is not thought as subject: □¬(∃y(y = s) & ¬Ss). As it does not decide whether the thinking being exists, it leaves open two alternatives: the metaphysically pregnant Ss & ∃y(y = s) and the merely logical Ss & ¬∃y(y = s). Thus although the inference appears to conclude something metaphysical about the soul with its ostensively existence-related and affirmative conclusion, it is in fact mere logical jugglery that accomplishes nothing of metaphysical significance.

The disjunctive conclusion shows that the rational psychologist now faces a dilemma: either he makes the inference sound by refraining from assuming existence, thereby forfeiting any metaphysically relevant conclusion; or he assumes the existence of the soul (as the object of the idea) and draws a metaphysically relevant yet fallacious conclusion.

*4.2. The Transcendental Equivocation*

The General Syllogism is not a fallacy of four terms. The middle term is the same concept throughout (“what cannot be thought otherwise than as subject”) – making the syllogism deductively valid. Insofar as one uses both premises without presupposing existence, the major premise applies to existing and non-existing objects alike, whereas the minor premise just states that the thinking being satisfies the antecedent of the major premise. The conclusion would be sound yet unable to establish any connection to real objects. Taken in a metaphysical signification, the inference does present a fallacy of equivocation, but a transcendental one in which the (same) middle term is covertly taken in two relations to a possibly existing object. Since general logic does not concern real objects (or lack thereof), the illegitimate existential presupposition must be an error in transcendental logic.[[50]](#footnote-50)

One might object that replacing some instances of ”thinking being” in the General Syllogism with ”existing thinking being” renders the inference a four-term fallacy. But this merely makes it a four-term syllogism of *transcendental* logic, for the two expressions do not denote different concepts but the same concept (“thinking being”) either with or without objective reference. For, famously, existence is not a real predicate that could change the concept (e.g. A219/B266, A233–4/B286, A597–9/B625–7). The difference between, e.g., ”actual” and ”possible dollars” does not lie in the *concept*: “the latter signifies the concept and the former its object” (A599/B627).[[51]](#footnote-51) It is thus essential for Kant’s theory of existence that the equivocation here is not between two concepts but between the same concept considered with or without reference to an existing object.

Similarly when Kant states that “the concept of substance in the paralogism of simplicity is a pure intellectual concept” (A403) rather than an empirical one, he is not saying that the premises have different concepts but that the “very same concept” (*ibid.*) is taken in two relations to its possibly existing object. Kant specifically states that whether concepts are “*empirical* or *arbitrary* or *intellectual*” has to do with the “origin of concepts in regard to their *matter*” and is therefore not a concern in general logic but “in metaphysics” (JL, AA 9:94). Indeed, transcendental logic concerns precisely this “origin of our cognitions of objects” (A55–6/B80).

As Bennett points out, the paralogistic inference can only conclude “an empty or ‘formal’ truth” (Bennett 1972, 72–3). A formally true judgment is true of *concepts* and their interrelations without necessarily being true of their (real) objects, i.e. materially true.[[52]](#footnote-52) “Unicorns are one-horned” is a merely formal (analytic) truth that does not (on its own) materially determine whether there might be unicorns (see Vanzo 2014). When the rational psychologist takes the inference to afford a metaphysically relevant material truth, he “misunderstand[s] and inflate[s] its conclusion” (Bennett 1972, 72). This is to say that the rational psychologist surreptitiously, without justification from the inference itself, chooses the conclusion that favours metaphysics: ∃y(y = s) & Ss rather than ¬∃y(y = s) & Ss.

While Bennett does not provide any good explanation as to *why* the rationalist would inflate the conclusion, we now see that the rational psychologist is prone to do so because he does not acknowledge the possible (transcendentally logical) conflation or hypostatisation of a concept with its object, as he had no conception of transcendental logic to begin with. Although unlikely to commit such an error in the case of e.g. unicorns (see A600–1/B628–9), the rationalist overlooks the distinction when considering such abstract and in some sense necessary metaphysical concepts as *soul*. As Allison points out, it is part and parcel of the rationalist method to (*contra* Kant) treat necessary truths of reason as material rather than merely formal truths (Allison 2004, 340; see A593–6/B621–4).[[53]](#footnote-53)

**5 – Epilogue: Pure and Impure Rational Psychology**

There is an obvious limit to the results thus far. The rationalist could amend the proof simply by providing independent grounds for the soul’s existence. Since it is even the most certain truth for Descartes that the thinking self exists, it is easy to imagine the rationalists’ indifference to the insufficiency of the General Syllogism.

Corey W. Dyck has recently shown that there are two kinds of rational psychology: “narrowly” and “broadly rationalistic psychology” – or pure and impure rational psychology. While the former (like transcendental logic) abstracts from all sensible and empirical content of our self-cognition, the latter is partially grounded on the empirical self of inner perception or experience and is therefore not purely logical. (Dyck 2014, 1–10.) Dyck also argues convincingly that Kant’s immediate predecessors and interlocutors were in fact broadly rationalistic psychologists and hence in prime position to avoid the above-mentioned dilemma. This would corroborate Ameriks’s claim that thus far Kant has only rebutted the *a priori* *inferences* of rational psychology, not the very possibility of metaphysical knowledge of the soul – for the broadly rationalistic psychologist could (and does) employ other proofs. (Ameriks 2000 [1982], 75–6.)

I have argued elsewhere (Kannisto 2017b, 154–60) that Kant was well aware of these ramifications in the Paralogisms and therefore mounted a two-pronged attack against rational psychology by explicitly distinguishing between its two argumentative methods, the “synthetic” and “analytic procedure” (B416–8). The former is the proper method of “rational psychology as a system” (B416) and is utilised by narrowly rationalistic psychology. His dissolution of the General Syllogism is designed to thwart only this synthetic procedure.[[54]](#footnote-54) Broadly rationalistic psychology, on the contrary, starts off with the soul as a special object of inner *experience*, i.e. from the perceived fact of the thinker’s existence. In doing so it follows the analytic procedure that begins “not from the concept of a thinking being in general [like the synthetic procedure] but from an actuality” (B418), namely from the “empirical proposition” (B422n) that “I *exist* thinking” (B428, my emphasis).[[55]](#footnote-55) Hence it circumvents the problem of existence that undermines the synthetic procedure, though it does have fatal flaws of its own.

To neuter the analytic procedure, Kant needs to show that the soul *in itself* (as required by rational psychology) cannot in fact be such an object of inner perception, and hence cannot be assumed to exist based on inner experience. Since transcendental idealism, established already in the Analytic, has disclosed all objects of experience as mere appearances, his rebuttal of the analytic procedure in the Paralogisms (B413ff.) just lays bare the consequences that adopting transcendental idealism has for broadly rationalistic psychology. The synthetic procedure of pure rational psychology, however, does not rely on the soul’s being an object of experience but seeks non-experiential, inferential knowledge of it. This is exactly why I believe pure rational psychology to be Kant’s main target in the Paralogisms, for it has hitherto remained untouched by the Analytic. Far from diminishing its importance, that Kant’s invalidation of the General Syllogism only touches the narrowly rationalistic psychology rather sharpens it.

Kant specifically states that he is in the Dialectic not interested in “the *transcendental* use or misuse of the categories” that ensues when one “does not attend enough to the boundaries of the territory in which alone the pure understanding is allowed its play” (A296/B352). Explaining how exactly impure rational psychology fails to adhere to these boundaries is, to be sure, one task of the Paralogisms, but it is the possibility of *transcendent* “principles that actually incite to tear down all those boundary posts” (A296/B352) that steps forth as the main, as of yet unchallenged threat in the Dialectic. And, crucially, its refutation cannot rely on transcendental idealism, for Kant rightly worries on the contrary that pure rational psychology would refute transcendental idealism[[56]](#footnote-56):

It would be a great, or indeed the only stumbling block to our entire critique, if it were possible to prove *a priori* that all thinking beings are in themselves simple substances [etc.]. For in this way we would have taken a step beyond the sensible world, entering into the field of *noumena* […]. Thus synthetic propositions *a priori* would not, as we have asserted, be feasible and accessible merely in relation to objects of possible experience [i.e., appearances], but rather they could reach as far as things in general and in themselves[.] (B409–10.)

If Kant’s removal of this “stumbling block” (transcendental realism) to his view that we only cognise appearances (transcendental idealism) were ultimately grounded on a mere reiteration of the latter, it would constitute an enormous circular argument. Although Grier presents a sophisticated explanation of how Kant refutes the broadly rationalistic psychologist – as well as a refined analysis of the nature and ground of the transcendental illusion underlying the paralogisms – she does ultimately commit Kant to such question begging because she overlooks precisely the fact that Kant has two targets that require two *different* refutations. By collapsing Kant’s critique of narrowly and broadly rationalistic psychology, she ends up claiming that the error of the paralogistic inferences can be avoided *only* by adopting transcendental idealism (Grier 2001, 99, 151, 158–9).[[57]](#footnote-57) But pure rational psychology must on the contrary fail of its own accord, without reference to transcendental idealism. One virtue of my reading is that it establishes exactly this by exposing that the very argumentative method of pure rational psychology is *inherently* fallacious.

However right Ameriks may be that Kant has thus far only refuted certain inferences of rational psychology, Ameriks too overlooks the two-part nature of Kant’s refutation of rational psychology. There is, first, the negative refutation – discussed in this article – of the pure rationalist’s *a priori* inference (as Kant construes it), which does indeed leave room for other proofs. But, second, Kant can rely on the wealth of argumentation that supports his own positive theory of the self, which in turn undermines broadly rationalistic psychology – even if it has to rely heavily on the Transcendental Analytic and transcendental idealism. As these two jointly refute all rational psychology, it is not true that Kant leaves the fate of the metaphysics of soul undecided.[[58]](#footnote-58)

Exposing transcendental paralogisms as fallacies in transcendental logic shows that the mere recognition that something might be necessarily true of a thought without there being any corresponding existing thing suffices to expose the gap in the paralogistic inference. This requires neither transcendental idealism nor even the very distinction between things in themselves and appearances. Kant can grant his opponent the truth of his premises, the validity of his inference, and therefore even the soundness of his argument, yet maintain that without an additional proof of the existence of the soul, the argument remains empty and merely logical with no metaphysical import.

**Conclusion**

Transcendental paralogisms are formal fallacies of transcendental logic, grounded on an equivocation of a concept as referring to an object in general (in thinking) with the same concept as referring specifically to an existing metaphysical object. Although my interpretation concerns only one part of Kant’s critique of rationalistic metaphysics, namely the method of pure *a priori* reasoning, it boasts significant virtues. First, it allows us to separate this part of Kant’s critique from his transcendental idealism, making it applicable independently of his own complicated philosophical system. Second, unlike e.g. Grier’s and Allison’s reading, my interpretation avoids the circularity of grounding Kant’s refutation of transcendentally realistic metaphysics of mind on transcendental idealism. Third, the formalisation of the General Syllogism facilitates its assessment by contemporary logical tools. Fourth, by allowing us to demarcate sharply between Kant’s critique of narrowly and broadlyrationalisticpsychology, it paves the way for a more precise explication of the latter. Finally, to my mind the formalisation of the paralogisms shows that Kant is right in rejecting *a priori* rational inferences as the sole means to ground metaphysics of mind. That a concept is related to a possibly existing object can never be proven in formal logic alone but requires developing and then applying criteria for *real* possibility – not of the concept and its non-contradictory nature but of the thing and its existence. This meta-metaphysical challenge to all metaphysics remains as potent today as it ever was.

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\_\_ **LB**: *Logik Busolt*. (ca. 1790). In: AA 24.

\_\_ **LP**: *Logik Philippi* (ca. 1772). In: AA 24.

\_\_ **ML2**: *Metaphysik L2* (ca. 1790–91). In: AA 28.

\_\_ **MMron**: *Metaphysik Mrongovius* (ca. 1782–83). In: AA 29.

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2. Bennett 1972: 72; Ameriks 2000 [1982], 48; Van Cleve 1999: 174; Grier 2001: 155–6, 157, 163; Allison 2004: 335. The paralogisms are construed as formally invalid also e.g. by Patricia Kitcher (1990, 183), Falk Wunderlich (2001, 176), Béatrice Longuenesse (2007, 151n2), Ian Proops (2010, 470), and Corey W. Dyck (2014, 100–1). [↑](#footnote-ref-2)
3. Translations of Kant’s works are from the *Cambridge Edition of the Works of Immanuel Kant*. Deviations from these translations are marked with “translation modified” or “translation amended.” References to Kant follow the *Akademie-Ausgabe* (AA 1–28) pagination, except for the *Critique of Pure Reason*, for which the original 1781 (A) and 1787 (B) edition paginations are used. [↑](#footnote-ref-3)
4. Guyer’s and Wood’s translation of *Form nach* as ”due to its form” contains specificity not found in the original: it suggests that a transcendental paralogism infers falsely *because* of the form of the *syllogism*. But, first, this “because” would be superfluous, as Kant attributes it to the “transcendental ground,” and second, Kant only speaks of inferring falsely as to form, not necessarily as to the form *of the syllogism* – crucially leaving open the form in question. (See section 2.) [↑](#footnote-ref-4)
5. *A*, *B*, and *C* may stand for individuals or general concepts, nouns or adjectives. Kant himself does not commonly use symbols but enumerates all possible forms resulting from modifying categorical judgments as to, e.g., quantity (“all”, “some”) or quality (“is”, “is not”). Here I will omit these forms as an unnecessary complication. (JL, AA 9:120–1, 122–3; HL 99–100.) [↑](#footnote-ref-5)
6. Only Grier explicitly characterises the fallacy as ”deductively invalid” ”from the standpoint of general logic” (Grier 2001, 157). Others speak only of a “formal fallacy”, implicitly taken as a deductive fallacy of general logic (i.e. a formal fallacy in the standard contemporary sense). [↑](#footnote-ref-6)
7. Meier (like Kant sometimes) speaks of ”antecedent” (*Vorder-*) and ”concluding” judgments (*Schlussurtheil*). Since Meier equates these with the Latin “*praemissae*” and “*conclusio*”, I translate them accordingly (Meier 1752a, §356). [↑](#footnote-ref-7)
8. In the *Dohna-Wundlacken Logik* from the early 1790s Kant gives the following definition: “An inference of reason that is false in <matter> is called a fallacy, and if it is false *in* <*forma*> — a paralogism. A *sophisma* is an inference that is false in *forma*.” (DWL, AA 24:777.) The expression “in forma” is also found in Kant’s marginal note of his copy of the A-edition *Critique*, next to the definition of transcendental paralogism: “A paralogism is a syllogism that is false *in forma*.” (E CLIV, AA 23:38.) [↑](#footnote-ref-8)
9. Since the conclusion is a judgment, one might think it belongs to the matter of inferences. But Kant identifies the conclusion with the mode or form of inference “insofar as it contains the *consequentia*” (JL, AA 9:121). This *consequentia* is the “if… then…” structure of a hypothetical judgment (A303/B360; JL, AA 9:105–6). That is, the form of a syllogism lies in the conclusion *insofar* as it includes the way in which one has inferred to it, i.e. not merely as a judgment *per se* but specifically as a judgment *derived from the premises*. [↑](#footnote-ref-9)
10. See also: “The propositions in an inference can be true, but the inference can nonetheless be false as to form, i.e., a fallacy.” (HL110; see also HL 96; DWL, AA 24: 772.) [↑](#footnote-ref-10)
11. While today syllogisms are called invalid rather than false, Kant speaks of both the “falsity” and “invalidity” of a syllogism equivalently. The term “soundness” does not enter Kant’s vocabulary – it was developed in the 19th century. He speaks rather of true and valid inferences and of the validity (i.e. truth) of the conclusion. The idea of soundness he would spell out in terms of the matter and form of syllogisms: a formally correct inference is valid; a formally *and* materially correct inference is sound. [↑](#footnote-ref-11)
12. Proops does recognise that for Kant a paralogism is a formal fallacy in that it ”is invalid, even though its premises are true” (Proops 2010, 468). However, Proops takes the invalidity to be deductive invalidity of general logic. [↑](#footnote-ref-12)
13. As Kant is commonly thought to have coined the term *formal logic*, one might still suspect that he must have deviated from his predecessors on this point. It is, however, not true that Kant coined the term in the first place (Wolff 1995, 202–3). Furthermore, neither Kant’s marginal notes (R 3203–13, AA 16:710–4, esp. R 3208) to his copy of Meier’s *Auszug aus der Vernunftslehre* nor any other passages known to me indicate any disagreement with Meier’s exposition of formal and material fallacies. [↑](#footnote-ref-13)
14. In *Hechsel Logik* Kant specifically says that in a *sophisma figurae dictionis* the “[*v*]*ox medii termini* [the word for the middle term] […] is taken in different meanings” (HL 110–11). (Kant distinguishes between concepts and words e.g. in JL, AA 9:11–13, 116; AA 20:260; VL, AA 24:792; DWL 24:754.) Notably, Meier equates *terminus* and expression (*Ausdruck*), which he defines as a word that signifies (*bedeutet*) a concept. In fallacies of ambiguity the same word signifies different concepts. (Meier 1752a, §440, §449, §457, §463.) Two words, e.g. German ”Mensch” and French ”homme”, can express the same concept: *human*. That the equivocation occurs when words are mapped onto concepts is clear from the fact that the fallacy of equivocation often disappears upon changing the language – e.g. when the English word “light” in the following example is replaced with the German words “hell” and “leicht”. In the *Port-Royal Logic*, too, the fallacy of equivocation involves a “confusion introduced by ambiguous words” (PRL 263). [↑](#footnote-ref-14)
15. Allison 2004: 335, Grier 2001: 163n. See also Wunderlich 2001: 176. Note that Kant never explicitly claims that a fallacy of equivocation involves four terms. Grier states otherwise (Grier 2001, 163n) but does not provide a reference. [↑](#footnote-ref-15)
16. The same expression ”be the content what it may” (*der Inhalt mag sein, welcher er wolle*) appears also in Kant’s definition of general logic (A53/B77), suggesting that a logical paralogism is one specifically in general logic. [↑](#footnote-ref-16)
17. E.g. Stuhlmann-Laeisz 1975, Schulthess 1981, Wolff 1995, MacFarlane 2002, Prien 2006, Rosenkoetter 2009, Tolley 2012. [↑](#footnote-ref-17)
18. Peter Schulthess makes the same observation (Schulthess 1981, 12). [↑](#footnote-ref-18)
19. For such an elaboration, see Wolff 1995, 204ff, esp. 229: “Kant does not call formal logic formal for instance because the rules it presents are formal rules. Namely, all logical rules are formal in some respect and relative to some content.” [↑](#footnote-ref-19)
20. This is hazardous also because there are several different ways in which the formality of “formal logic” can and has been understood even outside Kant scholarship – Catarina Novaes recognises eight such meanings, one of which is Kant’s (Novaes 2011; see also MacFarlane 2000 & 2002). [↑](#footnote-ref-20)
21. As we saw, the matter of a syllogism is its premises and its form is the inference or *consequentia* that determines the conclusion through them. For a thorough discussion of matter and form, consult Longuenesse 1998: 147–62. [↑](#footnote-ref-21)
22. Similarly e.g. pure spatiotemporal intuitions are “formal” because they have to do with nothing but the mere form of sensibility. [↑](#footnote-ref-22)
23. Although Kant sometimes distinguishes between *matter* (*Materie*) or *material* (*Stoff*) and *content* (*Inhalt*), here he appears to use them equivalently to refer to the objects of cognition or thinking (e.g. A59/B83; see also Rosenkoetter 2009, 205–12). This distinction is especially prominent in *Jäsche Logik*, where Kant contrasts the matter of concepts (§ 2) with their content (§ 7) (JL, AA 9:91, 95; compare also A70/B95 with A74/B99–100; cf. Wolff 1995: 120ff.; Brandt 1991, 62). In the Paralogisms the word “matter” (*Materie*) refers exclusively to physical matter; “content” is used once (A397–8) and “material” (*Stoff*) twice (A382, B423n) for objective reference. [↑](#footnote-ref-23)
24. According to Wolff, special logics are “the special rules that are used in a particular science when conducting proofs” (Wolff 1995, 209), e.g. in mathematics, physics, and jurisprudence (*ibid.*, 210). See also MVig, AA 29:983; Wolff 1995: 204, 241; Prien 2006: 41. [↑](#footnote-ref-24)
25. Transcendental logic continues to be interpreted in various incompatible ways – see especially Timothy Rosenkoetter (2009) and Clinton Tolley (2012). Full defence of my reading is a task for another article. What is important is that my interpretation yields substantial benefits for interpreting Kant’s Paralogisms. [↑](#footnote-ref-25)
26. I will not here enter the debate on how precisely to understand “objective reality.” In the relevant sense, however, a concept has objective reality if its object is at least *really possible*, i.e. can exist – regardless of whether it actually does (A95, A109–10, B148–51, A217/B264, A220–3/B267–70, B288–93, A338–9/B396–7, A594/B624n). In contrast, a logical object is something that at least *can be thought*, regardless of whether it can also exist. [↑](#footnote-ref-26)
27. Since Kant includes the schematism and the transcendental principles under the title Transcendental Logic, one might suggest that transcendental logic abstracts only from *empirical* sensible content, not from all sensible content. But there is, first, direct textual evidence against such a reading, cited above (A65/B89). Second, as we saw, we must distinguish between transcendental logic itself and its application conditions: “In a transcendental logic we isolate the understanding (as we did above with sensibility in the transcendental aesthetic), and elevate from our cognition merely the part of our thought that has its origin solely in the understanding. The use of this pure cognition, however, depends on this as its condition: that objects are given to us in intuition, to which it can be applied.” (A62/B87.)

In one sense, then, in isolation transcendental logic treats only the conceptual form that understanding contributes to the *thought* of the objects of cognition. In another sense (under the title Transcendental Logic in the *Critique*) it can also be considered in tandem with transcendental aesthetic. Hence it treats the *a priori* application conditions of the conceptual form (the categories) *both* to the *a priori* form (space and time) *and* the empirical content of sensibility. (A88–90/B120–2, B169.) This view accommodates the objection and has the advantage that in the Transcendental Dialectic one can again abstract from the specifically sensible application conditions of the categories and investigate whether *reason* via its inferences could bypass these conditions and apply the categories to the *transcendent* objects of the ideas of pure reason. For different takes on this complex issue, see Rosenkoetter 2009 and Tolley 2012. [↑](#footnote-ref-27)
28. E.g. Bxvii–xviii, B1, A96, A110, A119, A125, B146, A220/B267, A246–7/B303, A250. [↑](#footnote-ref-28)
29. Here Kant uses the exact same expression “as to form” as in his definition of transcendental paralogism, yet he clearly does not treat the categories as a subject matter of general logic. [↑](#footnote-ref-29)
30. In the same sense transcendental aesthetic is a formal science – a “science of the senses” (MMron, AA 29:802) – for it expounds time and space as the forms of sensibility and intuition (B148). See also A52/B76; Stuhlmann-Laeisz 1975: 5. [↑](#footnote-ref-30)
31. Kant speaks of both the ground of error (illusion) and the ground of truth or falsity. An example of the latter is: “[Internal criteria of truth] are objective criteria, which contain the ground for why something is really true or false.” (BL, AA 24:87–8.) An example of the former is: “A cognition is true […] *formaliter* […] when the grounds for proving and deriving it are correct." (BL, AA 24:97.) Technically the difference is between a ground of truth and a ground of taking-to-be-true (*Fürwahrhalten*), see JL, AA 9:65ff. [↑](#footnote-ref-31)
32. It is beyond the scope of this paper to discuss this central notion of transcendental illusion – Grier 2001 provides an excellent presentation. [↑](#footnote-ref-32)
33. Kant’s explicit definition of logical paralogism here presents only one aspect of fallacies and error in general: their *invalidity* or *falsity*. The other official requirement – that we take them to be valid or true – is implicit in the contrast to transcendental paralogisms. (See JL, AA 9:56, 134; VL, AA 24:824, 828, 832; DWL, AA 24:719–20.) [↑](#footnote-ref-33)
34. Due to the many differences in Kant’s presentation of the A- and B-Paralogisms, there is considerable variety of focus in the literature. Ameriks, Bennett, and Van Cleve concentrate on the A-edition, whereas Grier and Allison discuss both. I will mostly draw on the B-Paralogisms, and although I believe the superficial differences in Kant’s account of the error in both editions can be reconciled, I will not defend this view here (see Kannisto 2017b, 151–4). Nor do I attempt to offer a comprehensive analysis of such a rich chapter as the Paralogisms, choosing to focus rather on the logical structure of Kant’s critique of the transcendental paralogisms in order to formalise them in section 4 – and through that to make the fallacy in the transcendental paralogisms precise and explicit. [↑](#footnote-ref-34)
35. Although Kant has no systematic definition of the term “use” (*Gebrauch*), by transcendental and empirical use of concepts he means objective reference exclusively: using a concept is to (attempt to) ‘subsume’ (A248/B305) things under it, i.e. to determine something as its referent object. In transcendental use the domain of discourse consists of things in general, in empirical use it consists of appearances or objects of experience. Apart from the Paralogisms, this view is explicit in the Schematism and Phenomena/Noumena chapters. E.g. “The transcendental use of a concept […] consists in its being referred to [*auf … bezogen*] things *in general* and *in themselves*; its empirical use, however, in its being referred merely to appearances, i.e., objects of a possible *experience*.” (A238–9/B298, translation modified.) “Now to the use of a concept there also belongs a function of the power of judgment, whereby an object is subsumed under it.” (A247/B304.) Notably, this use is only *purported*, i.e. the object is *intentional*: such use of concepts involves “the subsumption of any sort of supposed object” under them (A248/B305). To emphasise this, Kant sometimes says that the “transcendental use” is “of no use at all” (A403; see also A247­–8/B304–5).For such a use would only be of ”a logical significance” and would ”not represent any object” (A147/B186–7), i.e. it fails to constitute *objective* use in the relevant (metaphysical) sense. (On objective use, see A161/B200, A286/B342, A327/B383.) Transcendental use of the categories is of no (objective) use at all because in the absence of “something given in intuition […] nothing would be given that could be subsumed under the concept”, which is to say that it “has no determinate or even, as far as its form is concerned, determinable object” (A247–8/B304). This “determinable object” is the *matter* of the concept (see 2.1). As we saw, transcendental logic alone without given (sensible) content can only anticipate the conceptual form of objects and does not determine any real objects. See also A139/B178, A146/B185, and note 38. [↑](#footnote-ref-35)
36. It is not altogether clear whether for Kant “being” and “thing” are equivalent terms, but in the Paralogisms he appears to use them more or less synonymously. I follow his practice. [↑](#footnote-ref-36)
37. The A-edition rendition appears entirely different: the inference allegedly conflates or makes two different uses of a category. [↑](#footnote-ref-37)
38. In terms of Kant’s A-edition exposition, in the major premise the category could even refer to things in themselves; the minor premise however is restricted to things as appearances. (A139/B178, A146–7/B185–7, A242/B299, A246–8/B303–5.) [↑](#footnote-ref-38)
39. It seems that whereas in the B-edition Kant expounds the condition under which the minor premise is true, in the A-edition he explains what the rational psychologist (erroneously) takes it to accomplish, namely that it applies to objects. The diagnosis of the error remains the same between the two editions, however. [↑](#footnote-ref-39)
40. Grier 2001: 130–1, 169–70, and *passim*; A384–6, A392–5, A402. [↑](#footnote-ref-40)
41. Kant’s multi-faceted and equivocal use of the terms “object” and “subject” is confusing. “Object” retains here the meaning assigned to it in section 2.2. “Subject” may denote the grammatical subject term “A” in “A is B”, contrasted with the predicate term “B” (see section 1). But it can also denote the psychological subject, i.e. the self, the I, or the thinking being. Kant frequently speaks of this I or thinking being both as the subject term in judgments of rational psychology, e.g. in “I am substance”, and as the *object* of rational psychology – a purported possibly existing *thing* or a *real* object. What is at stake in the Paralogisms is whether the thinking being (psychological subject) is also an existing thing (a real object), and indeed specifically one that can only be referred to by the grammatical subject of a categorical judgment, never by its predicate. If so, the psychological subject as a real object is, according to Kant, a *substance* – defined as an object or being “that could exist as a [referent of a grammatical] subject but never as [that of] a mere predicate” (B149). In the context of the General Syllogism, the “subject” in “thought / exists as subject” is always grammatical: it is the existing or merely thought referent of the subject term. Crucially, then, the “subject” here is not contrasted with “object” but with “predicate” (see e.g. note 49). [↑](#footnote-ref-41)
42. This explains why Kant adds the somewhat perplexing remark that the major premise talks about a being “even as it might be given in intuition” (B411; again in B411n), in spite of its applying merely “to object in general” (B411n) or its making a merely “transcendental use” (A403) of the category. It confirms that an object in general might – or might not – *also* be intuited and so be an existing thing. While the major premise remains noncommittal, the minor premise purports yet fails to determine the object specifically as intuited. [↑](#footnote-ref-42)
43. *Pace* Van Cleve, according to whom although the paralogism is logically valid and can have true premises, “there is no understanding of the middle term that makes both premises simultaneously acceptable” (Van Cleve 1999, 175). Van Cleve’s otherwise refined interpretation is unsupported by textual evidence and even contradicts Kant’s explicit acknowledgment (cited above) of a reading of the middle term that makes the premises and conclusion simultaneously true. [↑](#footnote-ref-43)
44. Thus the major premise concerns a logical object (see section 2 and ML2, AA 28:544). [↑](#footnote-ref-44)
45. It is unfortunate that Kant’s presentation of the General Syllogism is formally so incomplete. Assuming that he meant it to be formally valid at least in its explicit form, it can be remedied, however. First, it is reasonable to assume an *all*-operator, for (i) the “what” seems to be of a general significance, akin to “whatever”; (ii) Kant specifically refers to “things” and “object in general” (B411n); and most conclusively, (iii) according to Kant in “all categorical inferences of reason the *major* [premise] must be a universal proposition” (JL, AA 9:124; see also AA 23:38). Second, the “does not exist otherwise” must be understood apodictically as “cannot exist otherwise”, for (i) otherwise the conclusion would lack the apodicticity that Kant attributes to it throughout (see esp. B407–9, B412n); (ii) a substance is for Kant not merely something that does not exist otherwise than as subject, but something that *cannot* exist otherwise than as subject (e.g. B149, B407, A348–9, see also note 41); and (iii) choosing either modality in any case makes little difference: the same problem affects both the weaker “it is not true” / “it is true” and the stronger “it is not possible” / “it is necessary”. Third, I use *S* to denote the predicate *subjecthood* so that Kant’s “thought as subject” equals “is predicated subjecthood” – this is in line with his view of thinking as judging, which predicates concepts of subjects. It is important not to read “thinking” as an intensional expression – e.g. as believing – for the proof is supposed to be logical, not psychological or epistemological. (Kant frequently uses “thought” in an extensional sense, and it seldom refers to a personal beliefs.) Since “thought as subject” does not equal “exists as subject,” I have rendered “does not exist otherwise than as subject” via the impossibility of the conjunction that *x* exists yet is not predicated *S*. See also Proops 2010: 471. [↑](#footnote-ref-45)
46. To my mind, the reference to substance in the inference is otiose. The “therefore” (see section 3.2) only points out that the consequent spells out the definition of (real) substance: something that exists and is necessarily thought as subject (see note 41). Furthermore, Kant nonetheless allows for “a substance only in the idea” (A351), i.e. for a logical substance. His distinction between the valid yet metaphysically barren use of the term and its illegitimate metaphysical use would disappear if one identified “substance” with *real* substance. The numerous interpretative difficulties involved in the distinction between “real” and “logical” substance – often expressed in terms of the category of substance with or without schemata – cannot be addressed here. [↑](#footnote-ref-46)
47. The ”considered merely as such” does not contribute to the formalisation except by ruling out the otherwise legitimate interpretation: ¬◊¬Ss & ∃x(x = s). (See sections 3.2–3.) [↑](#footnote-ref-47)
48. In Fregean logic, true predication implies the existence of the object. This is not so for Kant, however: one can predicate something of an individual without that individual existing. E.g. ”God is omnipotent” is a necessary true *analytic* judgment that does not imply God’s existence (A595/B623). See also Vanzo 2014, Kannisto 2017a. [↑](#footnote-ref-48)
49. “However, that the I, who think, must always be regarded as *subject*, and as something that cannot like predicate be viewed merely as adhering to thinking, is an apodictic and even *identical proposition*” (B407, translation amended; cf. Werner S. Pluhar’s translation). See also note 41. [↑](#footnote-ref-49)
50. Grier is the sole interpreter to notice the relevance of transcendental logic here. According to her, Kant has “two rather different (albeit related) […] sense[s] of ‘formality’” (Grier 2001, 155), and in some cases “Kant’s criticism […] is more properly understood in terms of transcendental logic” (*ibid.*, 156). Nonetheless in her view Kant’s “claim that the error is a formal one simply refers to the supposed fact that the syllogism in question is deductively invalid” (*ibid.*; again on 157). But since deductive invalidity belongs to general, not transcendental logic, she does not give the latter a decisive role: in her view, that the fallacy is transcendental is merely a reference to the “transcendental misapplication” (*ibid.*, 157) of the categories that grounds the error. Crucially, Kant specifically claims that the Dialectic is not at all concerned with “the *transcendental* use or misuse of categories” (A296/B352). [↑](#footnote-ref-50)
51. Two concepts are different only if their intensions or contents are different, and modal predicates (including existence) do not concern this content at all: “The categories of modality […] do not augment the concept to which they are ascribed as predicates […]. If the concept of a thing is already entirely complete, I can still ask about this object whether it is merely possible, or also actual […]” (A219/B266). See also Kannisto 2016, 301–6. [↑](#footnote-ref-51)
52. E.g. A58–64/B82–88 and JL, AA 9:50–3. [↑](#footnote-ref-52)
53. The inferences appear logically sound because they *are* logically sound, and so any metaphysician who takes – as Kant accuses his predecessors of doing (A593/B621, A596/B624n) – the *logical necessity* of a judgment (the conclusion of a sound inference) for a *real necessity* of the object of that judgment would have to believe that the inferences of rational psychology establish *metaphysical* truths about the thinking self. This existential presupposition is illegitimate, as it violates the additional conditions that transcendental logic sets for objectivity. [↑](#footnote-ref-53)
54. When introducing the General Syllogism, Kant specifically speaks of the “procedure of rational psychology” (B410). [↑](#footnote-ref-54)
55. In the Paralogisms Kant distinguishes between the ”I think” ”taken […] problematically” – i.e. containing merely the concept ”I” – and ”as it may contain a perception of an existence” (A347/B405; see also B422n). Only the former can ground pure rational psychology. It is only in the context of his critique of broadly rationalistic psychology that Kant speaks of the ”’I think’ given as a proposition that already includes an existence in itself” (B 418, translation modified) – parsed as “I exist thinking” (B428). Indeed, since in the ”empirical proposition” (B428) ”I think” ”it is not determined whether I *could* exist and be thought of only as subject and not as predicate of another thing” (B419), it does not even show that the “I” (as an object) is something “that *cannot* be thought otherwise than as subject,” which, however, is what the antecedent of the major premise of the General Syllogism requires (see 4.1). This distinction tracks that between the synthetic and analytic procedure, where the former starts with “I think” and the latter with “I exist thinking”. [↑](#footnote-ref-55)
56. Kant has two interrelated senses of transcendental idealism. Narrowly speaking it is the thesis that space and time are mere forms of sensibility. Broadly speaking it is the thesis that we cognise only appearances, never things in themselves. (A369.) Here I use “transcendental idealism” in the broad sense – used especially by Grier (e.g. 2001, 151) and Allison (e.g. 2004, 3). *Since* all cognition (even through reason) depends on intuition, and all intuition must conform to ideal space and time, transcendental idealism pertains to all cognition (A490–1/B518–9). It is this broad sense of transcendental idealism that must not ground the refutation of pure rational psychology. [↑](#footnote-ref-56)
57. Similarly for Allison (2004, 340) and Dyck. Although Dyck acknowledges the worry that in his reading the Paralogisms would have force only against the broadly rationalistic psychologist, and provides a sketch of how to dispel it (Dyck 2014, 226ff.), I have argued elsewhere that his attempt is contrived because he, too, neglects to see precisely that Kant targets *two* distinct methods of rational psychology (Kannisto 2015). Bennett, too, inadvertently renders Kant’s argument toothless against pure rationalism when he concludes that their inferences neither “arise[] [n]or lead[] to any empirical knowledge of myself” (Bennett 1972, 72–3). The rationalist would surely shrug this off as inconsequential, for he seeks no empirical grounds or consequences but *rational a priori* knowledge. [↑](#footnote-ref-57)
58. For an explication of Kant’s refutation of broadly rationalistic psychology, consult Dyck 2014. [↑](#footnote-ref-58)