

# Logical Mistakes, Logical Aliens, and the Laws of Kant's Pure General Logic

Chicago — February 21<sup>st</sup> 2018

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## §1 – Introduction

**(1) Normativists:** logic's laws are unconditional norms for how we ought to think, and will govern anything that counts as thinking. (esp. MacFarlane, Leech)

**(2) Formalists:** logic's laws are criteria for being a thought, the violation of which makes a putative thought not a thought. (esp. Conant, Tolley, & Merritt)

**Tension:** over possibility of thoughts that violate logic's laws. (1), **yes**; (2), **no**.

**Resolution:** will allow us to explain the absolute normativity of logic's laws.

## §2 – Ontological, normative, and formal logic

Everyone agrees that Kant's logic is "pure" and "general."

Normativists and formalists introduce their interpretations through contrasting the conceptions of logic behind them with an ontological strand in Frege.

**Ontological:** (i) Thoughts are complexes of things. (ii) The laws of thought are maximally general truths (iii) They say how things are. Form: 'such and such is the case'—facts that structure all other facts (vi) Violations of these laws are not thoughts, just as violations of physical laws are not physical things.

**Frege's ontological strand:** E.g. Basic Law IIa, "what holds of all objects, holds also for each":  $\forall F \forall y (\forall x F(x) \rightarrow F(y))$ . Holds of all concepts and objects & does not depend on the existence of any specific kind of object.

**MacFarlane's Frege:** These ontological laws give rise to norms. Compare: Physics. Both produce systems of constitutive norms. Judgments need not accord with these norms. Judgers need not be aware of them. **MacF's Kant:** logic's laws are the norms.

**Normative (MacF's Kant):** (i) Thoughts are 'constitutively' governed by logic's laws; (ii) to be a 'constitutive norm' is to govern a thing essentially, in virtue of the kind of thing that it is. (iii) Logic's laws say how thoughts ought to be. Form: '*T* ought (not) to  $\varphi$ .' (iv) Thoughts in violation of these laws are still governed by them, just as we are still governed by the laws of morality if we violate them. (v) Can only evade the force of logic's laws by opting out of the activity of thinking and judging altogether.

**Conant's Frege:** tension b/t an **ontological** and a **formalist** (Wittgensteinian) strand. Frege's ontological "**elucidations**" – E.g. 'no concept is an object.' It is nonsense. But it illuminates a real feature of thoughts. Only give the illusion of sense.

Thus, two kinds of facts: those that can be expressed in thoughts and those ineffable facts that can only be indicated through elucidations.

For this reason, on the **ontological** strand, even the syntactic laws of logic, which merely govern the construction of well-formed thoughts, are substantive.

In Frege's apparent thought experiment about **logical aliens**, Conant finds the germs of formalism—a rejection of elucidations, ineffable facts, and substantive limits on thought.

**Formal** (Conant's Kant): (i) Thoughts are about facts and objects; they are not themselves facts or complexes of objects. (ii) Laws of logic are rules for combining representations or thoughts into new thoughts. (iii) They only articulate the form or nature of coherent thought—the system of coherent relations thoughts stand in with one another, no matter how things are with what they are about. (iv) They are “criteria of the form of truth” b/c agreement with them is requisite for the question of their agreement with a fact to arise, or for the combinations not to be nonsense.

### §3 – The Tension & Two kinds of illogical ‘thought’

**Logical mistakes:** E.g. draw a conclusion invalidly or do not recognize a contradiction. Violations of logical law by beings that those laws govern.

**Logically alien thought:** Logical aliens - beings “whose laws of thought directly contradict our own.” Their thought can violate our laws, but these laws do not govern them. (Threatens the universality or necessity of logical law.)

**Normativists:** we bungle our way into making logical mistakes from time to time.

**Formalists:** logical aliens are not a possibility, but at most the illusion of one.

**The tension's source:** if logical mistakes are thoughts, and some of these mistakes violate logical laws, then it seems we can think the negation of logical laws.

### §4 – Cognition & the function of the understanding

I think **the key** to seeing how Kant preserves the possibility of logical mistakes, while ruling out the possibility of logical aliens is his claim that logic is “the science of the rules of the understanding in general” (A52/B76).

**Function of the understanding** – forming cognitions or “unities of consciousness”

**Concepts:** indicate features common to many (esp. intuitions).

**Judgments:** unify or combine concepts.

**Inferences:** combine judgments in syllogisms, through a middle term, a concept.

In all: a **matter** (representations combined) and a **form**. E.g. ‘all As are B, all Bs are C, therefore all As are C,’ ‘not all As are B,’ or the form of concepts: generality.

Just as linguistic nonsense results when we combine words in a way that violates the rules of grammar, when we connect representations in a way that violates the rules of logic, we arrive at cognitions that are “not in agreement with themselves.”

**Ontological conception:** thoughts and its laws are the **same in kind**. (Problem!)

On **Kant's account** they are not the same. The understanding is a fallible faculty.

When its exercises violate its laws, these are **logical mistakes**.

This suggests nothing about the possibility or intelligibility of a **logical alien**.

### §5 – Logical mistakes

Many passages support either the possibility or impossibility of illogical thoughts.

**Task:** give an interpretation of logical mistakes that explains Kant's nonchalance.

**Strategy:** Two levels. (i) Exercises of the understanding and (ii) cognitions.

**Normativists:** Right that logic is normative for every (i), regardless of illogicality.

Wrong that all (i) exercises are (ii) cognitions.

**Formalists:** Right about logic's relation to (ii): illogical exercises are not (ii).

Wrong that violations of logic's laws are not even (i).

**Issue** is w/ formalist claim: "that which fails to accord with logical law simply loses its identity as an exercise of the faculty governed by this law" (Tolley, 385).

Makes logic non-normative (not a canon): The laws of logic do not govern violations, and so there is no longer a sense in which they *should* accord with these laws.

Formalists could try to get normativity back through **disjunctivism**—i.e. claim:

Norms of thoughts are authoritative for thoughts and some class of non-thoughts.

But the view that results from doing this correctly will collapse into my view. Why?

The formalist must find a common genus to include the relevant non-thoughts and thoughts, in virtue of which the same norms are authoritative for both.

Kant gets this genus through appealing to exercises of the understanding.

Irrelevant if we use 'thought' broadly for exercises or only narrowly for cognitions.

Putting together opposed predicates—*brightness & darkness*—I think nothing at all.

Illogical exercises of the understanding have the **illusion** of a certain logical form.

E.g. *bright darkness*. Not general—no possible instances—predicates cancel out.

E.g., "All Moors are men. The respondent is a man. Therefore, he is a Moor."

But these are not cognitions, "a whole of compared and connected representations."

## §6 – Logical aliens

Is this concern Kant's? Why think he must have a position on the issue at all?

If Kant allows logical aliens then the laws of logic would be merely subjective.

I would only be able to say "that I am so constituted that I cannot think" contrary to these laws, which "is precisely what the skeptic wishes most" (B168).

**Aim:** show Kant would rule out the possibility of logical aliens from the perspective of reason, the only perspective. **Step one:**

(i) The laws of logic are the essential laws of thinking, governing any thinking whatsoever (both normatively as exercises and formally as cognitions).

(ii) Our only means of making sense of the possibility that the laws of logic could be otherwise is thus an activity that is itself bound by the laws of logic.

(iii) So we would have to think about a coherent thought that violates our laws of coherent thought, while this thinking is bound by our laws of coherence.

(iv) Thus, we cannot make sense of the laws of logic being otherwise than they are.

**Step two:** Why hold that because *our* attempt to think about logical aliens ends in confusion, such beings are *impossible*? Why not retreat to agnosticism?

Compare: **other forms of sensibility**. Here Kant counsels agnosticism. **Why?**

We can form a **negative concept** of a **non**-spatio-temporal receptivity, because it is not essential to receptivity that it be spatio-temporal.

But the function of our intellectual faculties is to combine representations into **whole cognitions**, and logic's laws are the necessary conditions on this.

The understanding of a logical alien would unite representations into whole cognitions according to different laws.

But what kind of cognitions would these alien cognitions be, exactly?

They are supposed to be whole cognitions that violate the necessary conditions on uniting representations into whole cognitions. But **that is incoherent**.

So all thinking beings are governed by the laws of logic (whatever these are).

At least, if reason is the measure of real possibility—In the *Prolegomena* and elsewhere, Kant is explicit that he is presuming reason as his first principle.

This presumption is not unmotivated: reason (or the understanding) is the faculty that any thinking presupposes. This perspective is the only perspective.

## §7 – The necessity of pure general logic

**Thesis:** logic's unconditional/absolute normativity stems from the formalist insight that there is no intelligible alternate way coherent thought could have been.

Logic & chess: each provides **constitutive norms** because people are assessable in light of these norms, in virtue of the activity they are engaged in.

Chess: **Contingent** – rules can change over time / house rules.

Logic: **Necessary** (absolute/unconditional) – laws of thinking stay the same.

Bind even counterfactual thinking (MacF); rationally indubitable (Leech)

Chess: the rules **exclude** potential moves. E.g. Knights moving up three spaces.

Logic: Its laws **do not exclude** potential cognitions. Logically illicit exercises of the understanding do not indicate an alternate way thought could have been.

Now, the normative unconditionality of logic stems from this feature of exercises of the understanding: that illogical ones could never be whole cognitions. **Why?**

Well, it is impossible to think without being assessable by logic's norms because illogical exercises of the understanding are **not merely false**, but **confused**.

Kant's texts support this: illogical cognition is not merely false, but annihilates itself.

## Reply to Comments:

### What is wrong with MacF & Leech's normativism?

(1) Insofar as it leaves open the *possibility* that these laws hold only for us and not for all finite cognizing beings whatsoever, it falls short of establishing the laws of logic have the "necessity that is essential to" them (B168).

(2) It neglects how the formalist insight is what explains logic's normativity:

The understanding is the faculty for cognition and the laws of the understanding are formal conditions on cognitions.

Any exercise of the understanding that violates these laws is not cognition.

These failed exercises do not indicate an alternate way cognitions could be and these violations are never elucidatory, because there are no illogical facts.

In this way, the laws of logic are not like the laws of physics, psychology, or chess.

And this is why the laws of logic are unconditional or absolute.

If there were some such possibility, then there would be another way cognitions, the understanding, and its laws could be. But there isn't such a possibility.

And so it is because of the way violations of the laws of logic are not like illegitimate chess moves or physical judgments that contravene physical law, but are confusions, that the laws of logic are absolutely necessary norms.

**Am I a normativist by Tolley's lights?** Yes. In that I maintain failed exercises of the understanding are exercises. (But I preserve what is right about formalism.)

**McNulty's varieties of game rules:** I think the distinction between constitutive and merely regulative rules seems useful for many games (esp. e.g., Basketball).

NB. The question of when **a change in rules** is an adjustment of the same game, chess, or is a new variation—shmess—can have different answers.

What is important is that we can make sense of such changes in the case of chess, but we cannot in the case of thinking. (cf. §7 "Contingent vs. necessary rules")

**Lu-Adler's structural rules vs. veridical rules:**

(1) Granting we could find this distinction in Kant, then I'm interested in the nature of the veridical rules here, and my points would be restricted to those.

(2) More deeply, I agree with Tolley (390) that this modern distinction isn't in Kant. This is because although Kant will speak of thoughts as though they are **products**, they are fundamentally always **activities** or **acts** of the understanding.

And I think this distinction doesn't make sense for activities or acts. There are only acts of combination and rules governing whether these are successful or not.

(No important distinction between senseless (syntactic) contradictions and nonsense.)

**McLear's argument for the infallibility of the understanding:**

I agree that error only happens through an external power—No intrinsic fallibility.

So I endorse only fallible<sub>R</sub>. Why is this supposed to be a problem for my view?

There are supposed to be two opposed "identity conditions" on thoughts:

(1) Representations that accord with the understanding's laws.

(2) Representations normatively governed by these laws.

B/c I claim (2) is essential to exercises, and essential features should be had in isolation from other faculties, supposedly I am committed to intrinsic fallibility.

The understanding requires sensibility for its exercise. (cf. God does not think.)

So it seems every exercise of the understanding can go wrong.

So it seems the laws of logic are normative for every exercise.

In claiming (2) is essential to exercises I am not making a claim about the normativity of logic for the exercise of the understanding in isolation.

I don't know what such an isolated exercise would be. (Even not isolated in angels.)

Rather, I am claiming that in conceiving, judging, or inferring, I engage in an activity with an end, and the laws governing success are normative for that activity.

I get the sense that a desire for explanation is driving the worry that I do not share.

Similarly, I am puzzled why one would claim all exercises of the understanding—merely to be such exercises—must accord with the understanding's laws.

McLear seems to be looking for robust identity conditions on thoughts where I don't think there are any—or at least any beyond the mere striving of the exercise.



# Some passages related to “Logical Mistakes, Logical Aliens, and the Laws of Kant's Pure General Logic”

## §5 - Logical mistakes

Illogical or contradictory thought is **possible!**

He will often speak of contradictory cognitions as though they are perfectly intelligible, as when he says “a cognition is false if it contradicts itself,” (WL, 24:826). Specific types of illogical cognitions:

- (1) Fallacious inferences, where we are subject to a “logical illusion” because these imitate “the form of reason” (A296/B353; cf. A61/B85-86; WL, 24:828).
- (2) Kant is concerned with warding off the introduction of contradictions into our system of knowledge (e.g., Bxxxviii; Prol, 4:340-341; Eberhard, 8:194), so seems to maintain that we can make contradicting judgments.
- (3) Kant discusses concepts that contradict themselves, like “bright darkness,” whose object is a nihil negativum (e.g. A291/B348; MM, 29:792).

Illogical or contradictory thought is **impossible!**

He will also often deny the possibility of contradictory thoughts or cognitions, as when he says, “I can think whatever I like, as long as I do not contradict myself, i.e., as long as my concept is a possible thought” (Bxxvi, note; cf. Bxxvii; A155/B195; Eberhard, 8:195). Specifically:

Contradictory concepts and judgments “are nothing,” (A150/B189; cf. A291/B348); “contradiction entirely annihilates and cancels them” (A151/B190-B191).

He will even claim the principle of contradiction is inviolable (A152/B191), or that if the laws governing a power are essential (as he seems to think the “general and necessary rules of the understanding” that logic studies are (A59/B84)), “then the power cannot deviate from them” (WL, 24:824).

## §6 - Logical aliens

To paraphrase remarks Kant makes about the categories, If Kant cannot rule out a logical alien, then it seems the laws of logic “would lack the **necessity** that is essential to” them. Their necessity would be merely subjective, holding for me (and my kind) but extending no further, and I would only be able to say “that I am so constituted that I cannot think” contrary to these laws, which “is precisely what the skeptic wishes most” (B168).

Passage one:

It is obvious that if one wants to represent a thinking being, one must put oneself in its place, and thus substitute one’s own subject for the object one wants to consider (which is not the case in any other species of investigation) (A353-A354).

Passage two, pt. 1

Through this I, or He, or It (the thing), which thinks, nothing further is represented than a transcendental subject of thoughts = x, which is recognized only through the thoughts that are its predicates, and about which, in abstraction, we can never have even the least concept; because of which we therefore turn in a constant

circle, since we must always already avail ourselves of the representation of it at all times in order to judge anything about it; we cannot separate ourselves from this inconvenience, because the consciousness in itself is not even a representation distinguishing a particular object, but rather a form of representation in general, insofar as it is to be called a cognition; for of it alone can I say that through it I think anything. (A346/B404)

Passage two, pt. 2

But right at the start it must seem strange that the condition under which I think in general, and which is therefore merely a property of my subject, is at the same time valid for everything that thinks, and that on an empirical seeming proposition we can presume to ground an apodictic and universal judgment, namely that everything that thinks is constructed as the claim of self-consciousness asserts of me. But the cause of this lies in the fact that we must necessarily ascribe to things a priori all the properties that constitute the conditions under which alone we think them. Now I cannot have the least representation of a thinking being through an external experience, but only through self-consciousness. Thus such objects are nothing further than the transference of this consciousness of mine to other things, which can be represented as thinking beings only in this way. (A346-7/B404-5)

On reason as the first principle of metaphysics:

In the *Critique of Pure Reason* I worked on this question [i.e. *Is metaphysics possible at all?*] *synthetically*, namely by inquiring within pure reason itself, and seeking to determine within this source both the elements and the laws of its pure use, according to principles. This work is difficult and requires a resolute reader to think himself little by little into a system that takes no foundation as given except reason itself... (*Prol*, 4:274; cf. 10:340)

## §7 - the absolutely necessary laws of thought

**MacFarlane** on the unconditional, or absolute normativity of logic:

“We can correctly think about what the world would be like if the laws of physics were different, but not about what it would be like if the laws of logic were different. This is the sense in which the norms for thought as such are necessary: it is impossible to think at all, even counterfactually, without being constrained by them” (MacFarlane 2000, p.55).

**Leech** (2015, §3.1) on the rational indubitability of logical principles:

“The claim is that there are some logical principles *that do not admit of rational doubt*, or if they do, only at a prohibitive cost. There is an important sense in which one cannot properly even *question* these principles.”

Logic’s **unconditional normativity** stems from the **incoherence** of illogical cognitions:

Truth “is the agreement of a cognition with its object” (A58/B82).

Logic “must present [necessary, but insufficient] criteria of truth” (A59-60/B84-85).

The reason why agreement with the laws of logic is a necessary condition on truth is that when a cognition contradicts the rules of logic, it contradicts “the general rules of thinking and thus contradicts,” and even “annihilates,” itself (A59/B84; A151/B191. Cf. WL, 24:823).