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'Logic Is Transcendental': Content, Isomorphism and Intentionality in Wittgenstein's Logic of Depiction

Simone Nota

Institute of Philosophy, Zagreb, Croatia

Correspondence: Simone Nota (snota@ifzg.hr)

Received: 13 September 2025 | **Revised:** 11 February 2026 | **Accepted:** 24 March 2026

Keywords: content | intentionality | isomorphism | transcendental logic | Wittgenstein

ABSTRACT

According to most readers of the *Tractatus*, Wittgenstein's logic is empty or contentless, since it consists of tautologies that do not picture reality. This view, however, does not explain how and why Wittgenstein's 'logic of depiction' is transcendental (T, 4.015 and 6.13), especially given that Kant introduced transcendental logic through the notion of content. In this paper, I propose a transcendental interpretation of Wittgenstein's logic, as logic of depiction. On this view, Wittgenstein's logic has a *transcendental content*, namely the formal rules of combination internal to the subject's speech about objects. In fact, I argue that there are two interrelated pillars of Wittgenstein's transcendental logic: *isomorphism*, whereby objects constitute the common form of language and reality, and *intentionality*, as our capacity to pictorially relate to objects in language. Tautologies turn out to be dispensable by-products of pictures and, thus, of the transcendental (i.e., content-endowed) logic of depiction. The result is a reconception of Wittgenstein's logic, grounded in a systematic comparison with Kant.

I | Introduction

Climbing the ladder of the *Tractatus*, close enough to the top, we find a characteristically suggestive remark that Wittgenstein once envisioned as the end of the book[1]: 'Logic is transcendental' (T, 6.13). The remark has an unmistakable Kantian echo. Yet it cannot just be a blind endorsement of Kant, given Wittgenstein's insistence that no representations are true a priori (T, 2.225), which leaves no room for synthetic a priori judgements, so central to Kant's transcendental logic (A154/B193). How, then, can we account for Wittgenstein's remark on the transcendentality of logic (numbered 6.13)?

While there is a long-standing tradition of transcendental interpreters of the *Tractatus*,[2] no one has so far provided a systematic account of 6.13. Most interpreters are content to link the transcendentality of Wittgenstein's logic to the empty character of tautologies, which are *not* pictures.[3] That, however, does not yet explain how and why Wittgenstein's 'logic of depiction' is transcendental (T, 4.015). Indeed, Kant argued that the hallmark of transcendental logic is that it is *not* empty, for it has a 'transcendental content' (A79/B105; A56/B80), namely the a priori rules that are necessary for the possibility of thought about reality (for him, the categories). How, then, could Wittgenstein's logic be both empty *and* transcendental?

As of yet, no one has addressed this dilemma in depth, which seems fundamental for a correct understanding of Wittgenstein's logic. In this paper, I propose an interpretation that does so, by arguing that Wittgenstein's transcendental logic is not empty or contentless after all. Rather, not unlike Kant's one, it has a *transcendental content*: the logical forms internal to the subject's speech about objects. In fact, I argue that Wittgenstein's transcendental logic has two interrelated pillars: *isomorphism*, whereby objects are the common form of language and reality, and *intentionality*, namely the subject's capacity to pictorially

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relate[4] to objects. Tautologies turn out to be dispensable by-products of the transcendental (i.e., content-endowed) logic of depiction.

However, throughout the paper, I will also outline fundamental differences between Wittgenstein's transcendental logic and Kant's one. The key point will be that, while for Kant, transcendental logic is effable, insofar as the common form between thought and reality is *said* by synthetic a priori judgements, for Wittgenstein transcendental logic is ineffable, insofar as the common form between language and reality is *shown* in propositions (pictures) and logical sentences (tautologies). Yet if so, Wittgenstein cannot endorse Kant's position, but must instead deal with a transcendental content that is *ineffable*. It will be the main task of the paper to make a strong case for this view, without any recourse to the contentious notion of 'ineffable truths'.

The discussion will proceed as follows. § 2 briefly introduces Kant's transcendental logic through the notion of transcendental content, which is here elucidated. § 3 introduces the claim that Wittgenstein's 'logic of depiction' has a transcendental content too. The claim is defended and clarified in § 4: Wittgenstein's transcendental content—the form(s) of objects—is ineffably shown in the subject's language. §§ 5–6 then focus on the main requirements of Wittgenstein's logic of depiction, namely isomorphism and intentionality, characterizing them in a transcendental framework. Finally, § 7 argues that tautologies are dispensable by-products of Wittgenstein's transcendental logic of depiction: they do not *re*present any empirical content (situation), yet still *present* the transcendental content of logic (cf. T, 6.124), being constructed out of pictures.

If successful, my arguments could bring about a reconception of Wittgenstein's logic, grounded in a systematic comparison with Kant.

II | Kant's Transcendental Logic

Transcendental philosophy deals with the necessary conditions for the possibility of our representation of reality, insofar as they are known a priori (see *Prol*, 4:374n).[5] This should hold for transcendental logic too, with regard to *thought about reality*. To see this, let us start from Kant—or better, from his distinction between transcendental logic and (pure[6]) general logic. Indeed, the distinction is framed in terms of content, and thus it is crucial for our purposes.

According to Kant, logic is the science of the necessary rules of thought (JL, Intro, § 1; cf. A52/B76). However, this science can be considered in two ways (A52/B76): either in abstraction from the objects to which its rules may be applied, and thus in abstraction from *content* (A53/B77, A55/B80, A132-3/B171-2),[7] or with regard to content. By 'content', Kant means the 'relation of [cognition] to the object' (A55/B80, A59/B83). Thus, depending on whether one abstracts from or considers the relation between cognitions and object, one can distinguish between two logics for Kant: general and particular logic (A52/B76).

General logic abstracts from all content of cognitions (A54/B78), and thus does not concern their objective purport; rather, it only concerns the merely formal rules governing the relations among cognitions (A55/B80; A132-3/B171-2)—rules that are 'denuded of all content' (A152/B191),[8] such as the a priori principle of contradiction (A59/B84, A151/B190). As Kant writes:

> General logic abstracts [...] from all content of cognition, i.e., from any relation of it to the object, and considers only the logical form in the relation of cognitions to one another, i.e., the form of thinking in general.
>
> (A55/B80)

> A general but pure logic therefore has to do with strictly a priori principles [...] but only in regard to what is formal in their use, be the content what it may (empirical or transcendental).
>
> (A53/B77)

Something is immediately worth noting here. In making his point about general logic, Kant mysteriously introduces two kinds of content—empirical and transcendental. Why is that? As I will now endeavour to show, this is because *Kant's* transcendental logic is a particular logic,[9] distinguished from general logic insofar as it does not abstract from all content, but rather deals with a non-empirical, *transcendental content*[10]: the a priori *possibility* of the relation between cognition and object.

In effect, Kant's fundamental critical question is that of the possibility of the relation between representation and reality—'What is the ground of the relation of that [...] which we call "representation" to the object?' (C, 10:130). In other words, how is it *possible* for our representations to relate to objects at all? General logic is entirely silent on this critical question, since it abstracts from any relation between cognitions and objects. Thus, to answer it, Kant invented a new logic: his transcendental logic.[11]

In the first *Critique*—after having argued in the transcendental aesthetic that space and time are pure (a priori) intuitions—Kant introduces transcendental logic exactly in terms of a non-empirical, transcendental *content*:

> But now since there are pure as well as empirical intuitions (as the transcendental aesthetic proved), a distinction between pure and empirical thinking of objects could also well be found. In this case there would be a logic in which one did not abstract from all content of cognition [as general logic does]; for that logic that *contained* [...] the rules of the pure thinking of an object would exclude all those cognitions that were of empirical content. [...] Such a science [...] would have to be called transcendental logic.
>
> (A55-7; B80-81; my emphasis).

Here, Kant is indicating that transcendental logic is a content-endowed logic. However, it does not have an 'empirical content', for its rules are not related to objects a posteriori, through experience (cf. A720/B748). Rather, it has what Kant explicitly calls a 'transcendental content' (A79/B105). For transcendental logic

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contains the a priori rules that are necessary for the possibility of thought about objects, which he calls *categories*.

Famously, Kant's categories, such as <cause> and <substance>, figure prominently in his synthetic a priori judgements, such as 'all events must have a cause' and 'there must be a substance underlying change'. Yet if so, Kant's synthetic a priori judgements, central to his transcendental logic, are supposed to articulate or *say* transcendental content. Put otherwise, synthetic a priori judgements may be regarded as meta-judgements that are not so much about reality per se, but rather concern the a priori conditions that are necessary for us to think about reality at all (cf. A12/B25).

To sum up, Kant introduces transcendental logic through the notion of transcendental content, namely the (a priori) possibility of the relation between representations and reality. But he also finds this possibility, and hence transcendental content, in the categories, which are *said* by his synthetic a priori judgements. Given Wittgenstein's aversion to synthetic a priori judgements, the question now arises of whether his logic is transcendental insofar as it *shows* the possibility of the relation between representations and reality, thus showing transcendental content.

III | Wittgenstein's Transcendental Content?

There is a widespread assumption that Wittgenstein's main point about logic is that it is tautologous, empty or contentless.[12] The assumption goes back to Russell, as testified by his correspondence with Wittgenstein. After reading the *Tractatus* carefully and twice over, Russell wrote to his friend and former pupil: 'I am convinced you are right in your main contention, that logical prop[osition]s are tautologies, which are not true in the sense that substantial prop[osition]s are true' (L&D: 96). To which Wittgenstein replied:

> Now I'm afraid you haven't really got hold of my main contention, to which the whole business of logical prop[osition]s is only a corollary. The main point is the theory of what can be expressed (gesagt) by prop[osition]s – i.e., by language – (and, which comes to the same, what can be *thought*) and what can not be expressed by prop[osition]s, but only shown (gezeigt); which, I believe, is the cardinal problem of philosophy.
>
> (L&D: 98)

Instead of assuming that Wittgenstein's main contention about logic is that it is tautologous or contentless, let us heed his words. In his letter to Russell, he calls attention to 'the cardinal problem of philosophy'. That is no chance. Indeed, the theme of a single overarching problem of philosophy recurs repeatedly in Wittgenstein's pre-Tractarian journals.[13] Whenever it does, Wittgenstein is wrestling with the *possibility* of the relation between linguistic representations—propositions or 'logical pictures' (T, 4.03)—and the world.

A few examples will suffice here. In his wartime *Notebooks*, Wittgenstein writes that the '[formal] identity of sign and thing signified' is associated with 'the whole philosophical problem', later characterizing such identity in terms of an internal or logical relation between language and reality (NB 3.9.14 and 26.10.14). He then identifies 'the problem of truth' with the problem of how the correlation of linguistic signs and reality is possible (NB, 24.9.14 and 25.9.14). In introducing the topic of picturing, he further associates the concept of the correlation of proposition and reality to 'the solution to all [his] questions' (NB, 29.9.14). Again, in the context of a discussion of the 'principles' that make 'representation as such' possible, Wittgenstein talks of 'the whole single great problem' (NB 1.11.14; cf. NB 3.11.14 and 5.11.14). And the list goes on and on.

One might object that these quotations from Wittgenstein's *Notebooks* are very early, and as such cannot act as a reliable guide to the *Tractatus*. Fair enough. However, the possibility of the relation between representations and reality is clearly central to the *Tractatus* as well.[14] This is attested by such remarks as 'The possibility of propositions is based on the principle that objects have signs as their representatives' (T, 4.0312). What's more, Wittgenstein was still obsessed with similar issues in 1930,[15] remarking: 'That the relation between thought and the world cannot be represented [...] (for this representation does not say anything at all) must be the answer to my problems' (MS 108: 196[16])—a point to which we will return (see § 6).

This obsessive concern with the relation between representation and reality makes it hard to see how Wittgenstein's logic should be completely empty or contentless. Indeed, Wittgenstein writes that logic is interested in propositions 'ONLY insofar as they are pictures of reality' (NB, 5.10.14), that is, representations with pictorial content. Yet if so, his logic must deal with content. Or better, given his many passages quoted above, Wittgenstein's logic must deal with the *possibility* of pictorial content—one *contained* in logic itself. As we read in the *Tractatus*:

4.015[17]	The *possibility* of all imagery, of all our pictorial modes of expression, is *contained* in the logic of depiction.

But since the possibility of representational content *is* transcendental content, then, by containing 'the possibility of all imagery', Wittgenstein's 'logic of depiction' should have a transcendental content too. I will now defend and clarify this claim, with the aim of characterizing Wittgenstein's transcendental logic, as compared to Kant's.

IV | 'Logic is Transcendental'

We have seen in § 2 how Kant's transcendental logic contains the a priori rules which are necessary for thinking about objects, namely the categories. Let us generally call the a priori rules of logic, insofar as they are necessary for thought about reality, *transcendental rules*. At that point, we might say that the content of transcendental logic—the transcendental content—exactly consists of transcendental rules. These rules, for Kant, are not

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only 'rules for the combination of [...] cognition[s] in one experience' (*Prol*, 4:291), but also necessary rules governing the combination of objects into a unified spatiotemporal world (cf. A126-7; cf. A158/B197). Yet what does this have to do with Wittgenstein?

Well, very early in the *Tractatus*, Wittgenstein writes:

2.0121[18]	[(]Logic deals with every possibility and all possibilities are its facts.) Just as we are quite unable to think of spatial objects outside space or temporal objects outside time, so too there is *no* object that we can think of excluded from the possibility of combining with others. If I can think of objects combined in states of affairs, I cannot think of them excluded from the *possibility* of such combinations.

'Logic'—we read—'deals with every possibility'. But this comes down to the combinatorial possibilities of objects in states of affairs, which Wittgenstein calls logical forms (e.g., T, 2.0233; cf. 2.0141). Such forms—Wittgenstein suggests—are known 'from the outset' or a priori[19] (WWK: 214): 'A new possibility cannot be discovered later' (T, 2.0123).[20] Further, they are *necessary* for the possibility of our representation of reality, since, to be able to depict reality, pictures must share its logical form (T, 2.18). Put otherwise, to 'think of objects combined in states of affairs', we must know a priori the possibilities of their combination.

Now, insofar as it deals with logical forms—namely combinatorial possibilities known a priori as necessary for our depictions of reality—Wittgenstein's logic deals with transcendental rules. Indeed, just like Kant's categories are necessary rules for the combination of both cognitions and objects, so too Wittgenstein's logical forms may be regarded not only as 'the [necessary] rules governing the combination of objects'[21] in reality, but also those governing the combination of names into propositions, and thus as necessary rules of language.[22]

Given our earlier discussion of Kant, however, hearing that Wittgenstein's logical forms are transcendental rules might lead many to incredulity. That's because Kant regarded transcendental rules as the *content* of transcendental logic. And surely that cannot be the case for Wittgenstein, right? For, as the champions of the tautologous reading argue, Wittgenstein's logic says nothing, and thus has no content.

This objection has a kernel of truth, namely that Wittgenstein's logic says nothing (T, 6.11). However, it fails to distinguish between empirical and transcendental content. Empirical content is the object (Kant) or situation (Wittgenstein) that gets to be represented as part of empirical reality. Transcendental content is the possibility of representing an object (Kant) or situation (Wittgenstein) as part of empirical reality. For Kant, this possibility comes down to the categories, as a priori rules governing the combination of both cognitions and objects. For Wittgenstein, it comes down to logical forms, as a priori rules governing the combination of both names and objects. Yet if so, far from being empty, Wittgenstein's logic has a transcendental content: logical form.

That is the key to Wittgenstein's cryptic remarks on objects or substance:

2.021	Objects make up the substance of the world.
2.024	Substance is what subsists independently of what is the case.
2.025	It is form and content.

Substance—the logical form of all thinkable worlds (T, 2.021, 2.022, 2.023)—is also content.[23] Clearly, however, not the empirical contents of reality, for those would be situations for Wittgenstein. (Objects do not contain situations, but are contained in them as their constituents; cf. T, 2.011). Rather, the shared transcendental content of language and reality. For objects contain the possibility of all situations—of every sense (cf. T, 4.031 and 4.002). As we read in the *Tractatus*:

2.014[24]	Objects *contain* the possibility of all situations.
2.0141[25]	The possibility of its occurring in states of affairs is the *form* of an object.

Objects contain their forms. Or else, the form of objects is their content—their combinatorial possibilities in situations (cf. T, 2.012). But since 'logic deals with every possibility' (T, 2.0121), and that's 'the possibility of all situations' (T, 2.014), then Wittgenstein's logic has a content after all, namely the combinatorial possibilities of objects in situations—logical form(s). That is, for Wittgenstein as for Kant before him, the content of transcendental logic are the a priori combinatorial rules that are necessary for thinking about reality.

There is, however, a fundamental difference between Kant and Wittgenstein. Kant's transcendental logic deals with the common form of thought and reality, said by synthetic a priori judgements. That is, for Kant, the content of transcendental logic is effable. Wittgenstein, averse to the synthetic a priori (T, 2.225),[26] instead holds that the logical form common to language and reality cannot be said, but only be shown. That is, the content of transcendental logic is ineffable for Wittgenstein. As he writes in a 1917 letter to Engelmann[27]:

> And this is how it is: if only you do not try to utter what is unutterable then *nothing* gets lost. [T]he unutterable will be—unutterably—*contained* in what has been uttered!
>
> (Wittgenstein's emphasis)

And later, in the *Tractatus*:

4.12	Propositions can represent the whole of reality, but they cannot represent what they must have in common with reality in order to be able to represent it—logical form.

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4.121	Propositions cannot represent logical form: it is mirrored in them. What finds its reflection in language, language cannot represent. What expresses *itself* in language, *we* cannot express by means of language. Propositions *show* the logical form of reality. They display it.

Propositions, then, have an 'unutterable' transcendental content—the a priori logical form 'they must have in common with reality in order to be able to represent it'. Such content expresses itself *in* language, but we cannot represent it *by* means of language. It is shown in language, not said by it.

I am therefore in agreement with Narboux, who rightly stresses Wittgenstein's distinction between what expresses itself in language and what we express by means of it.[28] This distinction nicely maps onto Wittgenstein's later one between intransitive and transitive understanding (BB: 166–167),[29] respectively understanding of something that 'expresses itself' (such as a musical theme or a sentence's internal feature) and understanding of something in terms of something else (e.g., in terms 'of words or pictures'). However, although there is clearly something we understand in the intransitive case—something that, for Wittgenstein, *cannot be said* by words or pictures (ibid.), but can nonetheless be unutterably *contained* in the utterable—Narboux stops short of calling it 'ineffable content',[30] since that could suggest that what shows itself transcends language.[31]

To forestall this potential objection, we only need to recall the crucial distinction[32] between the transcendent*al* (the necessary conditions[33] or limits[34] of representation) and the transcendent (whatever would go beyond such limits), applying it to Wittgenstein's case.[35] What transcends the bounds of sense is simply nonsense for Wittgenstein (T, Preface). Nonetheless, the transcendental limit of language shows itself (CV: 13; cf. § 6). For the conditions for the possibility of thought about reality—and so transcendental content—are ineffably mirrored *in propositions*.

As a result, Wittgenstein's transcendental content—*what shows itself*—is not to be taken contrastively,[36] as something that somehow lies outside language and stands completely opposed to linguistically representable empirical contents (situations). Quite the contrary: transcendental content is logically built into[37] language and the world, since it makes linguistic representation of reality possible in the first place. Put otherwise, no genus is conceptually divided into two mutually exclusive species called 'empirical content' and 'transcendental content'[38]; rather, for Wittgenstein, empirical and transcendental content are two *specular aspects*[39] of the universal[40] expressivity of language: what we express through it and what it ineffably expresses on its own.

Perhaps, 'ineffable content' will still sound preposterous to resolute interpreters of Wittgenstein,[41] who will hastily associate it with the dubious notion of 'ineffable truths'.[42] Yet my view countenances nothing of the sort. All truths have the form *that p*,[43] whereas Wittgenstein's transcendental content—the form(s) of objects—does not have the form *that p*. Rather, it is unutterably contained in everything of the form *that p*, that is, any proposition depicting an empirical content. Just like a speck of paint may be contained in a painting without being that which is painted, so too Wittgenstein's objects may be (formally) contained in propositions, without being that which is represented by them (cf. T, 3.221). For objects—the transcendental form of reality or equivalently the transcendental content of language—are the *possibility* of empirical content. Hence, Wittgenstein writes:

3.13[44]	A proposition includes all that the projection includes, but not what is projected. Therefore, though what is projected is not itself included, its *possibility* is. A proposition, therefore, does not actually contain its sense, but does *contain* the possibility of expressing it. ('The content of a proposition' means the content of a proposition that has sense.)[45] A proposition contains the form, but not the content, of its sense.

I suggest interpreting this remark thus. A proposition contains the transcendental form of its sense (the logical form) but not its empirical content (the situation it represents). The empirical content is not contained in the proposition, since 'a picture represents its subject from a position outside it' (T, 2.173). The transcendental form is contained in the proposition, since the 'standpoint [of the picture] is its representational form' (ibid.), which is internal to the picture (cf. T, 2.174). We can recognize it *from within*[46] (cf. T, 4.114).

Notice that the distinction between empirical and transcendental content allows us to interpret some otherwise puzzling remarks on saying and showing. Wittgenstein famously writes that 'what can be shown cannot be said' (T, 4.1212). However, he also writes that 'a [proposition[47]] represents [...] its sense' (T, 2.221) and 'a proposition shows its sense' (T, 4.022), which, given 4.1212, seem completely incompatible. This tension is (dis)solved through our distinction. A proposition says 'the content of its sense', namely empirical content (the situation); and it shows 'the [logical] form of its sense', namely transcendental content (the possibility of the situation).

If I am right, logical form—the possibility of combination inherent to objects—is the transcendental content of logic, for Wittgenstein. But since Wittgenstein takes logical form to be shown, then the transcendental content of logic is ineffable for him. It cannot be said by language, as Kant wanted, but only be mirrored in it. And if so, logic is ultimately no science at all—as not only Kant, but also Frege and Russell wanted[48]—but rather a specular reflection of the world. In this (non)sense, Wittgenstein writes:

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6.13	Logic is not a body of doctrine, but a mirror-image of the world. Logic is transcendental.

That is Wittgenstein's 'main contention' regarding logic—the logical form of the world cannot be said, but only be shown, in the transcendental mirror of language. And to this shared logical form we now turn.

V | Isomorphism

So far, we have characterized Wittgenstein's logic of depiction as a transcendental logic that in some respects is similar to Kant's and in some others is not. We now need to enter deeper into the workings of Wittgenstein's transcendental logic of depiction.

When he first introduces pictures, Wittgenstein writes that they are facts representing other facts—structured combinations of elements representing structured combinations of objects:

2.15	The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.

But surely not every fact is a picture. For a fact, by itself, is not the representation of anything else (PG, § 96).[49] What are, then, the necessary requirements that make it possible for a fact to be a picture of reality? Indeed, what are the requirements of a transcendental logic of depiction?

The first, fundamental requirement Wittgenstein sets is *isomorphism*.[50] By 'isomorphism' I simply mean 'sameness of form'.[51] It's clear that—for Wittgenstein—picturing fact and pictured fact must share a common form:

2.16	If a fact is to be a picture, it must have something in common with what it depicts.
2.17	What a picture must have in common with reality, in order to be able to depict it—correctly or incorrectly—in the way it does, is its pictorial form.

Now, pictorial form is 'the possibility that things are related to one another in the same way as the elements of the picture' (T, 2.151). That is, if a fact is to be a picture, its elements must be combined in 'the same way' as the objects of the reality to be depicted. Yet since the form of any reality is an extract from the forms of its component objects[52]—their combinatorial possibilities—*these* must be shared by the elements of the picture. Only in this way, the picturing fact will be isomorphic to the pictured fact (they will have the same pictorial form).

The isomorphism is clearly transcendental, since 'a picture *must* have in common [pictorial form] with reality, in order to *be able to* depict it'. By a *transcendental isomorphism* I mean an isomorphism known a priori to consist of the necessary conditions that make possible our representation of reality. The combinatorial possibilities of objects are exactly known a priori as such conditions for Wittgenstein. For they are transcendental rules. Thus, Wittgenstein countenances a transcendental isomorphism between pictures and reality, lying in the combinatorial possibilities of objects—forms.

At this point, we must note that objects may have various combinatorial possibilities for Wittgenstein. Since 'space, time, and colour are forms of objects' (T, 2.0251), objects can combine into spatial, temporal, and chromatic situations. Accordingly, in the 2.17s, Wittgenstein suggests that there are several pictorial forms (e.g., spatial, temporal and chromatic forms), and thus several pictures (e.g., spatial, temporal and chromatic pictures):

2.171	A picture can depict any reality whose [pictorial] form it has. A spatial picture can depict anything spatial, a coloured one anything coloured, etc.

There is, however, a pictorial form common to any picture—*the*[53] logical form—which leads Wittgenstein to the introduction of logical pictures:

2.18[54]	What any picture, of whatever form, must have in common with reality, in order to be able to depict it—correctly or incorrectly—in any way at all, is *the* logical form [*die logische Form*], the form of reality.
2.181	A picture whose pictorial form is the logical form is called a logical picture.
2.182	Every picture is *at the same time* a logical one. (On the other hand, not every picture is, for example, a spatial one.)

The introduction of *the* logical form (of the whole reality) does *not* mean that space and time are not logical forms for Wittgenstein.[55] In effect, given that 'every picture is at the same time a logical one', then spatial and temporal pictures are logical pictures too. But how could they be, if space and time were not themselves logical forms?

If space and time were not logical forms, then they would have to be *illogical* forms. But at that point, by picturing spatiotemporal situations through spatial and temporal pictorial forms (cf. T, 2.17 and 2.171), we should have to think illogically—something clearly paradoxical (T, 3.03). Accordingly, Wittgenstein explicitly writes that space and time are logical forms in 'Some Remarks on Logical Form' (SRLF: 165) and suggests this in both his pre-Tractarian manuscripts (NB, 7.11.14, and 12.10.15), the *Tractatus* (T, 3.032, 3.411 and 6.375), post-Tractarian writings (PG, Appendix II: 261–2) and conversations. Indeed, for Wittgenstein, 'Space, time, and number[56] are *forms* of representation. They are designed to express every possible experience and for this reason it is wrong to base them on actual experience' (WWK: 214). That is, space and time are a priori forms

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of language—the a priori being something purely logical for Wittgenstein[57] (T, 5.4731; 6.3211).

It may be still objected that space and time cannot be logical forms for the early Wittgenstein, since he is clear that actual analysis has not yet come to an end, and thus that we cannot anticipate (a priori) the various forms that the elementary proposition will take (T, 5.55 and 5.557).[58] The second part of the objection is quite correct. More, space and time cannot be forms of the elementary proposition, since it is the mark of elementary propositions that they do not contradict each other (T, 4.211), whereas spatial and temporal pictures can. (For example, '*a* is to the left of *b*'—which pictures the situation that spatial object *a* stands to the left of spatial object *b* through the fact that sign 'a' stands to the left of sign 'b'[59]—contradicts '*b* is to the left of *a*').

This, however, does not detract from the point that space and time are logical forms for Wittgenstein, but rather confirms it. For upon analysis, non-elementary pictures that have space and time as their pictorial forms must ultimately be of the logical form *such-and-such-is-the-case*—which for Wittgenstein is the general form of *all* propositions (see T, 4.5), elementary and non-elementary. Indeed, if it is to 'deal with every possibility', Wittgenstein's logic must deal with spatial and temporal possibilities too, thereby dealing with the forms of space and time, *at least insofar as they instantiate the logical form of the whole world*.[60] In which case, space and time cannot fail to be logical for Wittgenstein.

What, then, is Wittgenstein's point in introducing '*the* logical form'? I take it to be this. Space and time are *particular* logical forms, through which we can depict specific situations; but they also instantiate the *general* logical form of the entire world, through which any situation can be depicted. For example, spatial form allows us to depict anything spatial (T, 2.171), and so it is particular in this regard. However, a spatial array can also be used as a picture of a temporal sequence, as is the case with a score representing a symphony (T, 4.0141).[61] What enables such depictions is not so much spatial form per se, but rather what it has in common with other particular logical forms like time—the logical form of the whole reality,[62] that is, the same general possibility[63] of logical combination (see LC30-33, p. 6[64]).

Before going on, it's worth stressing a further point. Wittgenstein's treatment of space and time as logical forms marks another decisive departure from Kant. To be sure, Kant too countenanced a transcendental isomorphism, consisting of space, time and the categories: the shared a priori form of experience and the reality experienced. However, according to Kant, space and time are aesthetic forms of our intuition, and thus they do not belong to (his) transcendental logic, as his categories do, but rather to (his) transcendental aesthetic.

Space and time being logical forms, for Wittgenstein, they belong to (his) transcendental logic.[65] As such, they cannot be propositionally depicted. For they are among the necessary conditions for the possibility of any depiction in the first place—conditions that we can never fully leave behind, insofar as we think or speak at all. Accordingly, Wittgenstein writes:

4.04	[A proposition and the situation it represents] must possess the same logical (mathematical) multiplicity.
4.041	This mathematical multiplicity, of course, cannot itself be the subject of depiction. One cannot get away from it when depicting.
4.0412	For the same reason the [transcendental] idealist's appeal to 'spatial spectacles'[66] is inadequate to explain the seeing of spatial relations, because it cannot explain the multiplicity of these relations.

Kant took himself to entertain propositions on space, qua form through which we experience. Indeed, the core tenet of his transcendental idealism is that space and time are forms of our intuition structuring the reality we experience, as opposed to reality 'as it is in itself' (A369). But a similar proposition can be entertained only if thought can go beyond the forms of space and time (for how else are we to think non-spatiotemporal things in themselves?[67]).

If, however, Wittgenstein is right in regarding space and time as logical forms of depiction, then nothing can count as thinking or entertaining propositions on space and time. For that would paradoxically require a picture to place itself outside its own representational form: the logical one. As you might have guessed, it is for this reason that Wittgenstein insists that logical form cannot be said. For

4.12	In order to be able to represent [the] logical form [common to language and reality], we should have to be able to station ourselves with propositions somewhere outside logic, that is to say outside the world.

Objects—the logical form common to language and reality—can only be shown.[68] Yet if so, Wittgenstein's transcendental isomorphism, as opposed to Kant's, is ineffable.

VI | Intentionality

We now have a clearer understanding of the first requirement of Wittgenstein's transcendental logic of depiction, namely isomorphism. Tractarian isomorphism is transcendental—albeit not quite in Kant's effable sense, but in Wittgenstein's ineffable nonsense. There is, however, a second requirement set by Wittgenstein, deeply interrelated to the first: *intentionality*.[69] Indeed, right after writing that 'pictorial form is the possibility that things are related to one another in the same way as the elements of the picture', Wittgenstein adds:

2.1511	*That* is how a picture is attached to reality; it reaches right out to it.
2.1512	It is laid against reality like a measure.
2.1513	So a picture, conceived in this way, also includes the pictorial relationship, which makes it into a picture.

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The idea here is this. Insofar as a picturing fact shares with the pictured fact its pictorial form—the same combinatorial possibilities—then the elements of the picturing fact must be pictorially related to the objects of the pictured fact. This 'pictorial relationship' makes a fact into a picture, namely a representation *of* the world (cf. T, 4.01). It endows a fact with the 'ofness' or 'aboutness' required to represent another fact. Yet if so, the pictorial relationship is an *intentional relation*—or better correlation:

2.1514	The pictorial relationship consists of the correlations of the picture's elements with things.
2.1515	These correlations are, as it were, the feelers of the picture's elements, with which the picture touches reality.

The business of picturing is thus a matter of intentionally correlating two facts—the picturing fact and the fact to be pictured—by means of the formal correlation of their constituents. Only thus can the elements of the picturing fact go proxy for the objects of the pictured fact, and stand in a possible combination for those objects, depicting them as combined in such and such a way in the context of a situation. For example, in the case of the elementary logical picture:

4.0311	One name stands for one thing, another for another thing, and they are combined with one another. In this way the whole group—like a tableau vivant—presents a state of affairs.

Interestingly, Wittgenstein glosses in his *Notebooks*[70]:

> The logical connexion [between names] *must*, of course, be one that is *possible* as between the things that the names are representatives of. (NB, 4.11.14[71]; my emphasis)

That is, the correlation between proposition and reality is *transcendental*. Insofar as the two are linked at all, names must share the same combinatorial possibilities of objects, so that a combination of names can represent a combination of objects (state of affairs). Yet if so, combinatorial transcendental rules are intrinsic to the intentional relation between language and reality for Wittgenstein. Once again, we are reminded of Kant, who argued that our intentional relation to objects is none other than the combination of terms in judgement according to transcendental rules (cf. A197/B242 and *Prol* 4:290).

The comparison with Kant may be pushed even further. For Kant was adamant that 'combination [...] can only be executed by the subject, since it is an act of its self-activity' (B130)—the transcendental 'act I think' (B423n), as 'vehicle' of the categories (A341/B399). Similarly, for Wittgenstein, '*We* make to ourselves pictures of facts' (T, 2.1; my emphasis), by combining elements according to the logical forms of objects. But then, *we* combine names in such a way that they have meaning, and the propositions in which they are combined have sense. 'We' is thus shorthand for the subjectivity who understands language (T, 5.62)—the *I say*.

Clearly, the 'I say' cannot be the empirical subject studied by psychology (T, 5.5421; cf. 5.641). For that would be an object in the world, and thus a possible subject-matter of speech—something *about* which we can say stuff (cf. T, 3.221)—rather than the speaking subject, who makes for himself pictures of reality. Wittgenstein clarifies this point in his attack on intentional idioms like 'A says p', which superficially make it seem as if the speaking subject were an object correlated to a fact (T, 5.541):

5.542	It is clear, however, that 'A believes that *p*', 'A has the thought *p*', and 'A says *p*' are of the form '"*p*" says *p*': and this does not involve a correlation of a fact with an object, but rather the correlation of facts by means of the correlation of their objects.

Upon reflection, however, the meta-linguistic form '"*p*" says *p*' turns out to be a misleading pseudo-form.[72] Language cannot say its intentional relation to reality,[73] since that relation is logically presupposed by any proposition for Wittgenstein (cf. T, 4.0312), as its transcendental condition of possibility (NB, 3.11.14; cf. T, 6.124). (Here we have a transcendental version of the 'logocentric predicament'[74]). Thus, Wittgenstein later writes:

> The limit of language shows itself [*zeigt sich*] in the impossibility of describing the fact that corresponds to [...] a sentence without simply repeating the sentence.
>
> (We are involved here with the Kantian solution to the problem of philosophy).
>
> (CV: 13[75])

There's a certain sense in which Kant aimed at articulating the 'I think',[76] and thus thought's intentional relation to reality (A109), by means of the synthetic a priori judgements of his transcendental idealism—'(I think) every event must have a cause', '(I think) there must be a substance underlying change', etc.[77] That was his solution to the critical problem of the possibility of our representation of reality ('the problem of philosophy'). For Wittgenstein, however, the intentional meaning-relation between language and reality cannot be said, exactly since it is the transcendental condition of all that can be said. The transcendental 'I say' shows itself in 'the language which I understand' (T, 5.62), insofar as I say anything about reality at all. It is the ineffable limit of both language and the world (cf. T, 5.632 and CV: 13).

We can now see why the interplay between isomorphism and intentionality lies at the very heart of Wittgenstein's transcendental logic of depiction. Kant believed the subject to be formally prior to the experienced objects, for it is the 'I think' who imposes a transcendental isomorphism onto appearances via his synthetic a priori judgements,[78] first enabling our experience of reality. If this view is to be intelligible, however, the 'I think' must also go beyond empirical reality[79] (by thinking things in themselves, etc.). By contrast, focusing on the objects I can speak about (T, 3.221), Wittgenstein is no position to hold that either the subject (intentionality) or the objects (isomorphism) are primary. For that would require the subject's language and the world to have different limits (cf. T, 5.6 and 5.61)—an unintelligible view, if the

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world is the totality of facts (T, 1.1), and thus the totality of the senses human beings can express (T, 4.002).

No metaphysical explanation *a là* Kant of the conformity between our representations and reality is thus necessary for Wittgenstein.[80] Quite the contrary, any such 'explanation' would be of no use,[81] and thus it would have no meaning for him (T, 5.47321). Subject and objects are correlated in formal unity from the outset. Insofar as he speaks at all, the subject intentionally relates to reality by combining signs according to transcendental rules—the forms of objects. Being originally intentional or 'projective' (T, 3.12; PR, § 20), language always already contains these transcendental rules (LC30-33: 97[82]):

> I have said elsewhere that a proposition "reaches up to reality", and by this I meant that the forms of the entities are *contained* in the form of the proposition which is about these entities. For the sentence, together with the mode of projection which projects reality into the sentence, determines the logical form of the entities.
>
> (SRLF: 169; my emphasis)

Yet if so, the projective-intentional relation to reality is already given with every logico-syntactic use of linguistic signs (T, 3.327):

3.11	We use the perceptible sign of a proposition (spoken or written, etc.) as a projection of a possible situation. The method of projection is thinking the sense of the proposition.

That is, the projective-intentional relation to reality is internal to language, essential to it. But since the essence of language is its pictoriality for Wittgenstein, then the projective-intentional relation is internal to depiction as such:

4.014	A gramophone record, the musical idea, the written notes, and the sound-waves, all stand to one another in the same internal relation of depicting that holds between language and the world. They are all constructed according to a common logical pattern. (Like the two youths in the fairy-tale, their two horses, and their lilies. They are all in a certain sense one).
4.0141	There is a general rule by means of which the musician can obtain the symphony from the score [...] That is what constitutes the inner similarity between these things which seem to be constructed in such entirely different ways. And that rule is the law of projection which projects the symphony into the language of musical notation.

Kant had distinguished contentless general logic from content-endowed transcendental logic. This allowed him to argue that we could entertain 'empty thoughts'[83] (see A51/B75)[84]—that we could think without thinking about something possible in empirical reality (Bxxvi, fn.; A244/B302; A596/B624fn; A610/B63). Given Wittgenstein's elucidations of depiction, however, logic essentially has a transcendental content. The logical form of objects is built into the subject's thought ab initio. Yet exactly for this reason, insofar as we think or speak at all, we think or speak about 'empirical[85] reality' for Wittgenstein (T, 5.5561):

3.02[86]	A thought *contains* the possibility of the situation of which it is the thought. What is thinkable is possible too.
4.5	The general form of a proposition is: This is how things stand.

That's why Wittgenstein's transcendental logic is essentially general (T, 6.1232; cf. T, 6.13 and 4.5). For by its very essence, it is valid for the space of all we can think or say (T, 4.5),[87] which for Wittgenstein is the space of every situation or sense (T, 4.002 and 4.5): *logical space*.

However, by the very same token, nothing counts as 'thinking of logical space'—for that should mean 'thinking outside logic'.[88] Nothing counts as 'saying logical space', as if by some metaphysical position outside it.[89] The whole logical space can only ever be *felt* in the mystical, as a feeling of the world as a transcendentally limited whole (cf. T, 6.45). The transcendental logic of depiction can only ever be perspicuously shown.

VII | Tautologies

We may now circle back to Wittgenstein's view of 'the propositions of logic', namely tautologies, and realize that they are a dispensable by-product of pictures, and thereby of the transcendental (content-endowed) logic of depiction. As Wittgenstein writes:

4.462	Tautologies [...] are not pictures of reality [...]. They do not represent any possible situations. In a tautology, the conditions of agreement with the world—the representational relations—cancel one another, so that it does not stand in any representational relation to reality.
4.4661	Admittedly, the signs are still combined with one another even in tautologies [...] i.e., they stand in certain relations to one another: but these relations are meaningless [*bedeutungslos*].
6.1	The propositions of logic are tautologies.
6.11	Therefore, the propositions of logic say nothing. (They are the analytic propositions.)

Here, Wittgenstein is making clear that, by dint of their unique construction, tautologies are 'limiting cases' of propositions (T, 4.466)—degenerate pictures, as it were.[90] Like all propositions, the 'propositions of logic' are constructions out of elementary pictures (T, 5).[91] However, the peculiar way in which elementary pictures figure in a tautology deprives them of their empirical content, and hence of their 'representational relations' to the

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situations they would otherwise depict. And while there remain the relations that linguistic signs bear to one another, these are 'meaningless'.

To see this, consider the following example. Let *p* be an elementary picture. According to Wittgenstein, by applying such operations as '&' (and) and '⌐' (not), we may construe the logical sentence '⌐ (*p* & ⌐ *p*)', which is a tautology (see T, 6.1201). Here, it is clear that the representational relations of *p* (the 'feelers' with which *p* 'touches' the reality it represents) have cancelled each other out. For while *p*, being a picture, represents a certain situation, which is its empirical content, '⌐ (*p* & ⌐ *p*)' does not represent anything at all, and thus has no empirical content. Rather, it is just a schema of the principle of contradiction.

Now, being all pictures constructions out of elementary pictures (T, 5.3), the applications of operations to other pictures may yield tautologies just as in the elementary case. Thus take 'it is raining'. Though Wittgenstein would not have regarded it as an elementary picture,[92] he surely would have regarded it as a logical picture, which has empirical content, insofar as it represents the world as being a certain way, making a cognitive claim on it. If, however, we apply to this picture the operations '$_{V}$' (or) and '⌐' (not) in a certain way, we obtain 'it is either raining or not raining', which is a cognitively empty tautology. For 'I know nothing about the weather when I know that it is either raining or not raining' (T, 4.461).

What does this have to do with Wittgenstein's transcendental logic of depiction? Well, insofar as it is uttered or apprehended,[93] 'It is raining' is a temporal picture, namely a picture that shares temporal form with a temporal reality (the event that it is raining). Indeed, for Wittgenstein, the tautological character of 'it is either raining or not raining' must be indicative of something regarding reality (cf. T, 6.12 and 6.22)—it reflects the logical form of time, and the logical impossibility that the same event should happen and not happen at once (NB, 12.10.16; cf. T, 6.375).

Now, the point just made applies to all pictures, whether they be temporal, spatial, chromatic, etc., insofar as they are all logical pictures. Thus, '*a* is to the left of *b*' is a spatial picture (cf. § 5). But I know nothing substantive when I know that 'either *a* is to the left of *b* or not'. This is a mere tautology, which does not say anything about the world. Still, for Wittgenstein, it reflects the logical form of space, therewith reflecting the logical impossibility of one thing being in two different places at the same time (cf. T, 6.3751).

If I am right, 'the logic of the world', that tautologies show[94] (T, 6.22), is essentially built in pictures for Wittgenstein (T, 3.42), starting at the elementary level and building up to the molecular one. More, given the essential interplay between isomorphism (objects) and intentionality (subject), 'the logic of the world' is always already 'the logic of depiction' (cf. T, 2.18 and 4.015). Tautologies are just a reflection of the logic of the world, or equivalently of the logic of depiction. As such, they *presuppose* the logic of depiction and its transcendental rules, contained in the pictorial relation that internally connects language to reality:

6.124[95]	The propositions of logic describe the [logical] scaffolding of the world, or rather they present it [*stellen es dar*]. They 'treat' of nothing. They *presuppose* that names have meaning and elementary propositions sense; and that is their [transcendental] connexion with the world. It is clear that something about the world must be indicated by the fact that certain combinations of symbols—whose essence involves the possession of a determinate character—are tautologies.

Tautologies presuppose the pictorial relation of propositions to reality. To that extent, however, tautologies are not independent of the transcendental logic of depiction, but rather are a mere reflection of it. Indeed, since the transcendental logic of depiction is the logic of the world, and since it is ineffably shown, then tautologies ineffably *present* the logical scaffolding of the world for Wittgenstein (rather than effably re-presenting it).

For this very reason, however, tautologies turn out to be dispensable. Language always already shows the logic of the world in standard propositions, that is, pictures:

4.1211	Thus one proposition '*fa*' shows that the object *a* occurs in its sense, two propositions '*fa*' and '*ga*' show that the same object is mentioned in both of them. If two propositions contradict one another, then their structure shows it; the same is true if one of them follows from the other. And so on.

Clearly, there's no need for 'propositions of logic' in this view. Granted, they can reflect logical form more perspicuously than those linguistic pictures that, by 'disguis[ing] thought' (T, 4.002), are the source of pernicious philosophical confusions. But their job can be discharged equally well by a perspicuous logical notation, transparently reflecting logical form:

6.122	The propositions of logic demonstrate the logical properties of propositions by combining them so as to form propositions that say nothing. It follows from this that we can actually do without logical propositions; for in a suitable notation we can in fact recognize the formal properties of propositions by mere inspection of the propositions themselves.

A perspicuous logical notation will help us recognize the logical properties that are *internal* to propositions as such. For logical form is the transcendental *content* of propositions or pictures, and therewith of the logic of depiction. Tautologies are just a dispensable by-product of the (content-endowed) transcendental logic of depiction. They are of interest only insofar as they presuppose that logic—only insofar as they are a characteristic mark of it:

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6.12	The fact that the propositions of logic are tautologies *shows* the formal—logical—properties of language and the world. The fact that a tautology is yielded *by this particular way* of connecting its constituents characterizes the logic of its constituents. If propositions are to yield a tautology when they are connected in a certain way, they must have certain structural properties. So their yielding a tautology when combined *in this way* shows that they possess these structural properties.

This, I have argued, is how we should read Wittgenstein's remark that 'Logic is transcendental' (T, 6.13).

VIII | Conclusion

In this paper, I have offered an interpretation of Wittgenstein's transcendental logic in terms of the notion of transcendental content, first introduced by Kant. The content of transcendental logic is the form that makes possible our thought about the world. For Kant, this form is *said* by synthetic a priori judgements, and calls for a metaphysical explanation of how the pure categories apply to empirical reality (appearances), determining the possibility of objectivity (cf. A92/B125). For Wittgenstein, instead, the logical form of the world is originally built into the subject's propositions. No metaphysical explanation is required. The possibility of the objectivity of our representations—the transcendental content of logic—simply *shines through* them. Tautologies presuppose this possibility and, to that extent, they show it too, therewith showing the transcendental content of logic.[96]

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

Endnotes

[1] Potter (2020: 376).

[2] For example, Stenius (1960); Pears (1969); Hacker (1972); Glock (1997); Moore (1997, 2012); Appelqvist (2016).

[3] Glock (1997: 292); Potter (2008: 61–2); Appelqvist (2016: 704–5); cf. Moore (2012: 234).

[4] I recognise that there are non-relational views of intentionality (cf. Nota 2021). In the context of our discussion of Wittgenstein, however, I will treat intentionality as a relation. Cf. § 6.

[5] Cf. Smith & Sullivan (2011) and Nota (2024a: Ch. 1_K).

[6] Henceforth, by 'general logic' I will mean 'pure general logic', which Kant distinguishes from 'applied general logic' (A53/B77), in that the former 'has no empirical principles, thus it draws nothing from psychology' (A54/B78).

[7] Cf. Sullivan (2004: 704–5).

[8] Among the rules of Kant's general logic, there are thus also the 'functions' or forms of judgement—such as the subject-predicate form ('S is P') and the hypothetical if-then form ('if x, then y')—at least insofar as they 'abstract from all content of judgement in general' (A70/B95). The relation between the mere (i.e., contentless) forms of judgement and the categories is extremely complicated in Kant's philosophy, and so I cannot deal with it in this paper. I cannot, however, resist the temptation to report a relevant quote from Kant: 'The same understanding, therefore, and indeed by means of the very same actions through which it brings the logical form of a judgment into concepts by means of the analytical unity, also brings a *transcendental content* into its representations by means of the synthetic unity of the manifold in intuition in general, on account of which they are called pure concepts of the understanding that pertain to objects a priori [viz. categories]; this can never be accomplished by universal [or general] logic' (A79/B105; my emphasis). For discussion, see Longuenesse (1998).

[9] In the first *Critique*, Kant does not explicitly say that his transcendental logic is a 'particular logic' and the issue is debated in Kant scholarship (see Tolley 2012). This, however, is the most natural reading of Kant (see MacFarlane 2002: 48), not least given that A52/B76 is the only passage in which Kant distinguishes between general and particular (or 'special') logic. The passage comes right before the introduction of Kant's transcendental logic, and in the rest of the text Kant always distinguishes between general logic and transcendental logic. Further, in the *Groundwork of the Metaphysics of Morals*, Kant explicitly writes that 'general logic, which sets forth [...] rules of thinking in general, differs from transcendental philosophy [and hence from transcendental logic], which sets forth the *special* [...] rules of pure thinking, that is, of thinking by which objects are cognized completely a priori' (GMM, 4:390; my emphasis). For a conspicuous body of textual evidence in support of the view that Kant's transcendental logic is a particular or 'special' logic, see also Tonelli (1994: 80–92).

[10] However, as I argue in §§ 5–6, Wittgenstein's transcendental content is such that we cannot 'abstract' from it (leave it behind, as it were). And that's why, I will also argue, his transcendental logic is not a particular logic, as opposed to a general one, but rather it is essentially general.

[11] 'Under which conditions are judgments that claim objective validity possible at all? [...] This is the revolutionary new question of [Kant's] transcendental logic' (Gottschlich 2015: 293–4).

[12] For example, Goldfarb (2010: 69 and 2011: 14); Hylton (2005: 139); cf. Potter (2008: 58–61, 234).

[13] See Kremer (2007: 155).

[14] Cf. Appelqvist (2016: 698).

[15] After his return to philosophy in 1929, Wittgenstein attacked the problem of the relation between representation and world from a variety of angles: the relationship between expectation and expected (PR, §§ 16, 25), intention and intended (PR, §§ 21, 24), desire and desired (PR, § 26), memory and remembered (PR, § 19), imagination and imagined (PR, §§ 12, 38), etc.

[16] My translation from German.

[17] My emphasis.

[18] Translation slightly emended to render the German *denken* with 'think'.

[19] Cf. Maddy (2012: 491).

[20] Cf. Levine (2013: 219).

[21] Stern (1995: 50).

[22] Ibid.

[23] For a different interpretation of 2.025, see Johnston (2007: 371).

[24] My emphasis.

[25] My emphasis.

[26] Cf. McGuinness (1988: 253); and Sullivan (1996: 202).

[27] Engelmann (1968: 6–7).

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[28] See Narboux (2014).

[29] Cf. Bell (1987: 242).

[30] This is possibly due to the widespread tendency of portraying 'ineffable content' in terms of (quasi)thoughts or (quasi)propositions that somehow cannot be put into words (Conant and Diamond 2004: 65–66; cf. Belleri 2013: 342). As I clarify in the main text, however, I do not regard ineffable content in this way.

[31] Cf. Narboux (2014: 204–205). Note that Narboux is aware of Wittgenstein's letter to Engelmann (ibid.).

[32] For Kant's distinction between the transcendental and the transcendent, see A296/B352 and *Prol*: 4:374n. For discussion, consider Bell (2001: 177), Förster (2012: 105) and Sullivan (2013: 257).

[33] And by extension, anything that deals with such conditions, such as transcendental logic.

[34] These conditions can be limits in one of two ways. Either they are *limits proper*, namely necessary conditions of what they limit, to which no alternative is thinkable; or else they are *limitations*, namely necessary conditions of what they limit, to which alternatives are thinkable. For example, Kant's space and time are limitations, in that they are necessary conditions for the possibility of our human experience, and yet he allows that we can think other finite rational beings who might not share with us these conditions (Gomes, Moore, Stephenson 2022: 131–2), as well as think non-spatiotemporal things in themselves (Bxxvi, A28/B44, A36/B52). Wittgenstein's logical form(s), on the other hand, are limits proper, in that nothing counts as thinking illogically (T, 3.03, 5.4731), or conceiving of an illogical world (ibid., and T, 3.031). For discussion of the distinction between limits (proper) and limitations, see Moore (2013), Sullivan (2013), Pier (2023) and Nota (2024b).

[35] Cf. Potter (2020: 376).

[36] I am here endorsing a 'non-contrastive' understanding of saying and showing (see Kremer 2001: 62; and Narboux 2014), partly inspired by Peter Sullivan's understanding of *limits* (Sullivan 2011a, 2013). On the difference between (non-contrastive) limits and (contrastive) limitations, see note 34 above.

[37] Compare Nagel (1997: 61), Sullivan (2011b: 162), and Potter (2020: 376).

[38] In fact, the very 'idea' of such a conceptual division collapses in Wittgenstein's case, since it would paradoxically require us to put transcendental content into words, which would make it sayable after all. Compare Narboux, who warns that 'it would be misleading [...] to think of expression as a genus dividing into two coordinate species' (2014: 211), namely what we express (or say) by means of language and what language itself expresses (or shows).

[39] According to Narboux, Wittgenstein's formulations suggest that the showable and the sayable 'stand to each other like mirror images [...]. For what shows itself to be showable simply is for it not to be sayable; its not being sayable is not something over and above its being showable. The two aspects are strictly equivalent. One switches from the one to the other by a mere reversal of perspective' (2014: 209). I would only add that the switch is between the empirical and the transcendental perspective, the latter being 'the right logical perspective' for Wittgenstein (T, 4.1213), exactly since logic is transcendental. I argue in detail for this view in forthcoming work.

[40] This is a nod to the universalistic interpretation of Wittgenstein's 'all-embracing, world-mirroring [*weltspiegelnde*] logic' (T, 5.511). Compare Hintikka & Hintikka (1986: Ch. 1) and note 48 below.

[41] For example, Goldfarb (2011: 14); Conant and Diamond (2004: 65–66).

[42] Cf. Hacker (1972 : 81; 2000: 357; 2013: 47).

[43] Levine (2013: 210).

[44] My emphasis.

[45] This qualification—'the content of a proposition that has sense'—must sound pretty weird. For what other content can there be? If I am right, however, even senseless logical propositions display a *transcendental* content for Wittgenstein—a '[transcendental] connexion with the world' (see T, 6.124)—and that's the reason for this otherwise inexplicable qualification. I return to this point in § 7.

[46] For the view that investigation 'from within' is a defining feature of transcendental philosophy, see Hartmann (1966: 248–9), Bell (1999), Nordmann (2005: 50), Stroud (2011a: 7 and 2011b) and Gardner (2015: 2; cf. page 13, on the internal character of transcendental philosophy).

[47] Wittgenstein writes 'picture' here, but as is well known he equated propositions with (logical) pictures.

[48] For Frege, 'logic is the science of the most general laws of truth' (1979: 128). For his part, Russell too regarded logic as a science (1918: 521), which is concerned with 'the real world just as truly as [other sciences like] zoology, though with its more abstract and general features' (Russell 1919: 169). However, it is important to note that Frege and Russell see logic as a *content-endowed* science. In fact, on their universalistic conception (see Van Heijenoort 1967, Goldfarb 1982, Kuusela 2019: Ch. 2), logic has maximal content (Levine 1996: 162–3), for its subject-matter is everything (Goldfarb 1979: 352). Thus, Frege argues that logic disgorges a 'rich content' (1980: § 16; cf. 1972: § 232; and Sullivan 2004: 701–703), since its laws or forms range over all objects, concepts and relations, whatever their specific nature (Frege 1980: § 70; cf. Ricketts 1986: 76; cf. Putnam 1995: 247–8; Levine 1996: 162). Similarly, for Russell, logic deals with logical forms, namely the result of the utmost generalization of empirical propositions (Russell 1984: 97–98), yielding for example the subject-predicate form and the relational form (ibid.). What distinguishes Wittgenstein from Frege and Russell, then, is not that he regarded logic as contentless (he did not), but rather his view that logic's (transcendental) content cannot be described or articulated, since logic is no science at all.

[49] Cf. Putnam (1981: 1).

[50] Cf. Sellars (1963: 41–43).

[51] This is perfectly consistent with the etymology of the term, which comes from the Greek *ísos* ('same') and *morphḗ* ('form'). So isomorphism literally means 'same form', and outside of mathematics that is the meaning that is still prevalent (Sullivan 2013: 265).

[52] Pears (1977: 189).

[53] In Ogden's translation of the *Tractatus*, approved by Wittgenstein himself, we read of '*the* logical form' [*die logische Form*]. As I argue in the main text, *the* logical form is more general than particular logical forms, such as space, time and colour (see SRLF: 165; LC30-33: 6; T, 6.3751; cf. main text below). This point is taken up and insightfully discussed by Ramsey, in his 'Critical Notice' to the *Tractatus* (1923: 467–8).

[54] My emphasis. Translation emended to render *die logische Form* as 'the logical form'. Cf. footnote above.

[55] Mauro Engelmann (2021: 33–4) has recently argued that space and time are *not* logical forms for Wittgenstein. In the main text, I argue against this kind of view.

[56] While it would be interesting to discuss why Wittgenstein substituted *colour* with *number*, I will refrain from doing so for reasons of space.

[57] I add 'for Wittgenstein', since for Kant the a priori is not purely logical. Indeed, he argued that space and time are a priori *intuitions*, belonging to his transcendental *aesthetics*. I return to this point in the main text.

[58] Giving an inventory of the specific forms of the elementary proposition would be the task of what Wittgenstein called 'the application of logic' (T, 5.557), namely the actual carrying out of analysis, which proceeds a posteriori or empirically (Frascolla 2007: 71–2; cf. T,

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5.5571). Here lies another important difference between Wittgenstein and Kant. Indeed, Kant gives a priori a complete inventory of the pure categories, namely the 'elementary concepts' that figure in (his) elementary judgements: synthetic a priori judgements (cf. A83/B109). Accordingly, Kant can list the specific forms of such elementary judgements (e.g., the object-property form, the ground-consequent form).

[59] '*a* is to the left of *b*' is a *spatial* picture since 'here we have a spatial relationship between words symbolizing a spatial relationship between things' (Kenny 2006: 4). Other spatial pictures include three dimensional models, such as the miniature model of an automobile accident that famously inspired Wittgenstein's picture theory of the proposition. Compare T, 3.1431.

[60] Cf. Potter (2008: 228).

[61] Cf. Ricketts (1996: 78).

[62] Cf. Kenny (2006: 4).

[63] This 'general' possibility of logical combination might be characterized in terms of the common logical features of entire classes of facts, irrespective of their specific forms (e.g., spatial, temporal, chromatic). Quite unsurprisingly, Wittgenstein does not give any example. Perhaps partly inspired by Russell, Wittgenstein had in mind general forms like the relational one, that is, *xRy*, which may be common to facts of different specific forms (see Zalabardo 2015, Ch. 2). In any case, for Wittgenstein as against Russell, logical form is not in a transcendent platonic heaven. Rather, it is transcendent*ally* built in the objects and, therewith, as I argue in the main text, in thought about them.

[64] 'A spatial order can correspond to a temporal one. There's a special & general arrangement'.

[65] Hence, Wittgenstein writes that objects are seen together with space and time—indeed, together with the whole logical space—from the *aesthetic* perspective sub specie aeternitatis (NB, 7.10.16). That is, for Wittgenstein, logical form is *perspicuously* shown from an aesthetic perspective. And that's because he has no room to distinguish between transcendental logic and transcendental aesthetic, as Kant instead does.

[66] The spectacles analogy to characterize Kant's transcendental idealism goes back at least to Russell. In his 1913 'The Philosophical Importance of Mathematical Logic', Russell writes: 'Idealism—at least every theory of knowledge which is derived from Kant—assumes that the universality of a priori truths comes from their property of expressing properties of the mind: things appear to be thus because the nature of the appearance depends on the subject in the same way that, if we have blue spectacles, everything appears to be blue. The categories of Kant are the colored spectacles of the mind' (1913: 491). Later, in his *History of Western Philosophy*, Russell extends this analogy to Kant's forms of intuition, in particular space: 'If you always wore blue spectacles, you could be sure of seeing everything blue (this is not Kant's illustration). Similarly, since you always wear *spatial spectacles* in your mind, you are sure of always seeing everything in space' (1948: 734; my emphasis). In any case, given this textual evidence, it is overwhelmingly likely that Wittgenstein took the spectacles analogy from Russell, either in conversation with him or from reading his 1913 article. Notably, Russell suggests that we can never take our spatiotemporal spectacles off for Kant, whereas I will suggest in the main text that this is exactly what Kant argues we can do in 'empty thought', for example, mere thought of (non-spatiotemporal) things in themselves. Indeed, the whole spectacles analogy makes sense only on the assumption that one can take the spectacles off. It is exactly for this reason that Wittgenstein takes issue with the analogy, since for him space and time are *logical* forms, and nothing counts as 'thinking outside logic'. But more on this in the main text.

[67] Cf. Bxxvi and A369.

[68] Levine (2013: 210); cf. Ricketts (1996: 93).

[69] Cf. Kenny (1981); and Brandt (2017: § 1).

[70] One might speculate over why Wittgenstein did not include this gloss in the *Tractatus*. The reason, I believe, is simply that the passage from the *Notebooks* creates the illusion that there may be "impossible combinations" or "illogical combinations" of objects, when instead, the combinatorial possibilities of objects are logical ab initio (see T, 4.466). The transcendental insight from the *Notebooks* is better captured by the *Tractatus*: if they are to be *combined* at all in the propositional nexus, names must reflect the combinatorial possibilities of objects (ibid.).

[71] Notice that, in the *Notebooks*, this remark immediately follows the one that would have later become the Tractarian remark on the proposition as a *tableau vivant*.

[72] Apel (1994: 6).

[73] Hintikka & Hintikka (1986: 4–9).

[74] The logocentric predicament is the circularity whereby "in order to give an account of logic, we must presuppose and employ logic" (Sheffer 1926: 228). The importance of the logocentric predicament for Wittgenstein's early philosophy has been stressed by Goldfarb (1979: 353), Ricketts (1985) and Kuusela (2019: Ch. 2). Notably, Kant was aware of the predicament, as attested by his remark that the question 'What is truth?' led logicians to fall into a 'miserable circle' (A58/B82). It would be the task of another paper to explain how he tried to address the circle.

[75] Translation slightly emended, to render the German *zeigt sich* with 'shows itself'.

[76] Cf. Heidegger (1973: 20). I use this circumspect formulation since even Kant admitted that 'the transcendental subject of thoughts = × [...] is recognized only through the thoughts that are its predicates, in abstraction [from which], 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' (A346/B404). Among the predicates of the transcendental subject, however, there are the genuine 'transcendental predicates'—*not*, 'one', 'truth' and 'good' of the scholastic tradition (B113-114; cf. Gracia 1992), but rather the *categories*, which figure in synthetic a priori judgements. In this sense, as I argue in the main text, Kant aimed at articulating the 'I think' in synthetic a priori judgements.

[77] Cf. Heidegger (1997: 105).

[78] Cf. Sacks (2006: 93–4).

[79] Not, however, beyond the *possibility* of empirical reality, since the 'I think' is itself a transcendental condition for the possibility of (the experience of) a unitary spatiotemporal world. To go beyond the possibility of empirical reality, the 'I think' should have to go beyond *itself*, which as Kant recognised is absurd (B420).

[80] Cf. Sullivan (1996: 198 and 2005: 44).

[81] Potter (2020: 377).

[82] 'The intention *contains* the rule of using [signs]' (my emphasis).

[83] It's a matter of debate whether Kant's 'empty thoughts are completely empty—in which case, it's hard to make sense of their status as thoughts (cf. McDowell 1996: 3–4 and 68)—or if they can retain a 'thin' (merely conceptual) content, as opposed to a 'thick' one (concepts + intuitions). For example, one may interpret Kant as saying that the full-fledged categories have thick content, insofar as they are combinatorial rules applied to spatiotemporal intuitions (or in any case applicable to data of sensibility), whereas the mere forms of judgement have thin content, insofar as they are merely logical rules for the combination of concepts in judgement. In this view, concepts are the "logical matter" for judgement (A266/B322), but their mere combination does not guarantee that they represent anything real (as in the judgement "God is benevolent"). This has to do with Kant's

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distinction between merely logical and real possibility (see Bxxvi, fn; A244/B302; A596/B624fn; A610/B63), respectively the possibility of a thought and the possibility of something's being, which Wittgenstein instead equates (T, 3.02). On the distinction between 'thin' and 'thick' content, cf. Moore (2012: Ch. 5).

[84] Cf. Moore (2006: 333).

[85] As rightly noted by Peter Sullivan (1996: 216, fn. 41), the term 'empirical' in 5.5561 effects no restriction. Indeed, the limit of empirical reality—Wittgenstein writes—'also makes itself manifest in the totality of elementary propositions', out of which one can construe *all* propositions or pictures (cf. ibid. and T, 4.01, 4.12, 4.21, 4.26, 4.51).

[86] My emphasis.

[87] As Diamond writes: '[T]he general form of the proposition [...] says nothing [...] but [...] *contains* (in a sense) all the combinations of signs to which *we* do give sense, every combination of signs that does say something' (2000: 168; my emphasis). However, Diamond argues that our giving sense to a combination of signs has nothing to do with a transcendental subject (ibid.). As opposed to this, I have argued that it *essentially* does.

[88] Cf. Diamond (1988: 11).

[89] Cf. Potter (2024: 366).

[90] Proops (2024: 206); cf. Conant (1991: 139).

[91] Cf. Levine (2013: 201).

[92] Again, that's because the mark of an elementary proposition is that its conjunction with another elementary proposition cannot be a contradiction (T, 4.211). If 'it is raining' were an elementary proposition, 'it is sunny' should be too. But since their conjunction results in a contradiction, they cannot be.

[93] I say 'insofar as it is uttered or apprehend' because uttering or apprehending are processes that take place in time. The fact that uttered or apprehend words stand in certain temporal relations may, for example, symbolize the successive fall of rain droplets. In that case, the pictorial form of representation will be temporal. If, instead, we use the spatial relations among written signs to represent the temporal process of raining (e.g., '¦'), the pictorial form will be *the* logical form, as in the example of a score representing a symphony examined in § 5.

[94] Notice that while Wittgenstein maintains that tautologies reflect the formal properties of both language and world (T, 6.12 and 6.22), he is also clear that *contradictions* might serve this purpose just as well (T, 6.1202; cf. NdM, p. 107). Space and time, as we have seen, are formal properties ('forms') of both language and world for Wittgenstein. If that is right, the contradiction '*a* is to the left of *b* and *b* is to the left of *a*' *shows* the (logical) structure of space and time, such that a body may only ever occupy one point of space at any given time.

[95] My emphasis.

[96] This work has been fully supported by the Croatian Science Foundation under the project IMEX (IP-2022-10-5915). I am grateful to James Levine for countless conversations on the topics of this essay in Dublin, José Zalabardo and Michael Potter for fewer but equally illuminating ones in London and in Cambridge, as well as to two anonymous referees for their helpful comments on an earlier draft.

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