

KANT ON THE ORIGINALITY OF TIME (AND SPACE) AND INTELLECTUAL SYNTHESIS

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1. Introduction: The Non-Conceptualist Reading of Kant

Non-conceptualism is a position in the philosophy of mind, cognition, and perception, tackling a wide range of philosophical problems, most of which are concerned with getting an adequate understanding of how human beings and other minded animals get cognitive access to the world around them. For the purpose of this paper, I shall use the following short declaration of non-conceptualism: Non-conceptualism is the view that minded animals can have representational content which is independent of (autonomous from) their conceptual capacities.¹

Pioneering work in the contemporary debate on non-conceptual content in perception was made by scholars such as Gareth Evans (1982), Fred Dretske (1981), and Christopher Peacocke (2001a).² Evans, for example, maintains that there are perceptual information-links to the spatial objects of perception independently of conceptual mediation. Peacocke understands the non-conceptual content of perception as including not only the objects of that perception but also “the ways in which they are perceived” (2001a:241), that is, involving “a certain orientation”, “a certain distance and direction from itself” (2001a:260). For Peacocke, not only spatial but also temporal aspects of perceptual experience play an important role in establishing concept-independent content, as the variation of perspectival views

¹ See Bermúdez and Cahen (2012) for a further definition of non-conceptualism in general. The declaration above is a “working-definition” and is valid for some but not all forms of non-conceptualist approaches. A more precise characterisation of non-conceptualism is given in Hanna (2014, supplement 1). Hanna defines non-conceptualism as a “three part thesis”: “(NC1) [...] not all rational human conscious objective representational content is determined by conceptual capacities alone, (NC2) [...] at least some rational human conscious objective representational contents are both autonomous from and independent of conceptual content and also strictly determined by non-conceptual capacities alone, and (NC3) [...] that at least some and perhaps most non-rational human or non-human animals are capable of conscious objective representation”. In the context of the Transcendental Deduction of Kant’s *Critique of Pure Reason*, to which I mainly refer in this paper, the third point about non-rational minds will not be of any relevance; this is why I put this issue aside for the current purpose. For a non-conceptualist analysis of Kant’s claims regarding animal representation, see McLearn (2011). Important contributions until 2003 to the debate on the existence of non-conceptual content are collected in Gunther (2003); a recent collection for the Kantian discussion on non-conceptual content is provided in Heidemann (2013), and see Schulting (2016) for the very latest work on the Kantian non-conceptualism vs. Kantian conceptualism debate.

² Although not with explicit reference to the current debate, the issue involved in the (non-)conceptualism discussion certainly was around for a longer time, as the dispute on the adequate reading of Kant’s philosophy shows. Furthermore, the same philosophical issue is also present in the phenomenological tradition, e.g., in early Heidegger and Husserl. Similarly to the situation with Kant, Heidegger was clearly influential on first developments of non-conceptualist positions, although it appears to be, again, disputed whether one really has to read Heidegger as maintaining a form of conceptualism or of non-conceptualism. Golob (2014:2), for example, denies that “Dasein’s primary level of experience is nonconceptual” and defends this account “against the widespread treatment of Heidegger as a pioneering nonconceptualist”. By contrast, Onof and Schulting (2015:10) label Heidegger as a “radical” non-conceptualist, emphasising the autonomous role of imagination in Heidegger’s reading of Kant. Concerning Husserl’s views, Hopp (2011) argues for a distinctly non-conceptualist position on the basis of Husserl’s account of perception, tracing an adequate understanding of perceptual content back to Husserl.

over time can constitute a minimally objective layout of the world (see Peacocke 2001b: 614).³

The question about the nature of a human mind’s sensible, spatiotemporally structured and phenomenally rich access to perceived objects—and its relation to this mind’s conceptual capacities—is not only of contemporary interest but pervades, furthermore, Kant’s philosophy. Distinguishing (i) the sensible capacity for representing objects spatiotemporally and in a direct-referential way from (ii) the capacity for the conceptual thinking of objects in a general way and for the conceptualisation of perceptually given representational content *prima facie* corresponds to Kant’s dualistic approach to human cognition. Kant distinguishes between “two fundamental sources in the [human; M.B.] mind”, sensibility *and* understanding (or intellect), and further between two representational kinds, sensible intuitions *and* concepts (A50/B64). Concerned with a correct understanding of this fundamental doctrine of Kant’s theoretical philosophy, we have to ask if *there really are*, for Kant, representations in the human mind which have a relation to an object that is *not* constituted by the work of the intellect. The affirmative position holds that *sensibility alone is sufficient for yielding a legitimate sense of objectivity*.⁴ Whether we can ascribe such a thesis to Kant is, however, contested among Kant scholars, since Kant also provides reasons to think that the relation of our representations to objects stems from the conceptualisation of perceptually given matter—for Kant, the intellect furnishes a perceptual manifold with (objective) unity (cf. A107, B139 and B143). The acceptance or non-acceptance of this thesis divides readings of Kant’s theoretical philosophy into non-conceptualist and conceptualist positions, respectively.

Colin McLear (2015) points out the basic problem of the interpretative divide as follows: “Either sensibility, independently of any synthesis, furnishes the mind with objective representations (intuitions), or such objective representations depend, at least in part, on mental acts of synthesis” (2015:81). He terms the position supporting the first alternative “sensibilism”, the second one “intellectualism”. We have to be cautious, however, not to over-intellectualise Kant’s notion of ‘synthesis’ here. Kant uses the term ‘synthesis’ at least in two different ways: Kant distinguishes, according to §24 of the B-Deduction, between a sense of synthesis meaning the action or mechanism that synthesises the manifold given in our human way of sensibility (i.e., the spatiotemporal way), and a sense of synthesis meaning an intellectual connection (*Verstandesverbindung*). This is the difference between *synthesis speciosa* and *synthesis intellectualis* (B151). The same twofold meaning becomes apparent in §10 of the *Leitfaden* chapter where Kant introduces for the first time his conception of ‘synthesis’. On the one hand, he says that synthesis is an “action of putting different representations together with each other and comprehending [*begreifen*] their manifoldness in one cognition” (A77/B103). This aspect of synthesis thus allows for conceptually grasping the unity of a given manifold of representation. On the other hand, as Kant states, the

³ Peacocke (2009:752–3) sees “temporal matters as temporal order, temporal intervals, and consequently certain rates of change with respect to time” as manifestations of non-conceptual content in perception.

⁴ Allais (2009:405), for example, distinguishes between two levels of representing an individual object in Kant, namely, between “perceiving a particular” and “representing a particular *as an object*”. Whereas the second level contains categorial determinations of the object, the first one allows for being “presented with empirical particulars as uniquely located in an oriented and egocentrically-centered, three-dimensional framework” (2009:404). Sensibility is sufficient for the first level of representing objects but not for representing objects in a “full-blown sense” (2009:405). A Kantian non-conceptualist thus holds, on the one hand, that there is a legitimate sense of objectivity furnished by sensibility alone, that is, that there is a ‘sensible’ basic form of intentionality, or object awareness, and on the other hand, that this sensible sense of objectivity does not exhaust the ways in which representations of the human mind are directed towards objects. For example, having a “sensation” (B208) as such would not suffice for *any* sense of objectivity. However, representing by means of an empirical intuition (perception) is not identifiable with representing a sensation as a subjective state, as for Kant an intuition “relates immediately” to objects (A19/B33). But the latter still is not identifiable with representing an intellectually established objective context, as when we “posit an object for [...] representations” (A197/B242), which may include conceptually distinguishing between subjective and objective orders of representation (cf. A193/B138)—a theory Kant develops in the Second Analogy (A189/B232ff.).

synthesis in general is, as we shall subsequently see, the mere effect of the imagination, of a blind though indispensable function of the soul, without which we would have no cognition at all, but of which we are seldom even conscious. Yet to bring this synthesis to concepts is a function that pertains to the understanding. (A78/B103)

Kant hereby maintains that synthesis usually is a “blind” action or mechanism of the human mind conducted by the imagination, and that only the action of bringing a synthesis to concepts, that is, conceptualising the synthesis, would be a work properly assigned to the intellect. This *Leitfaden* passage perfectly fits the distinction between *synthesis intellectualis* and *synthesis speciosa* in §24 of the B-Deduction. In being aware that there might be different aspects of synthesis in Kant’s doctrine of cognitive capacities, I want to emphasise that we have to understand a non-sensibilist reading of Kant’s views on theoretical cognition as one that maintains that objective representations are in some way dependent on *synthesis intellectualis*.

Possible candidates—in the context of the First *Critique*—for having non-conceptual content are the following species of (Kantian) representations: pure intuitions, empirical intuitions (perceptions)⁵, connections of perceptions (experiences), images, and schemata.⁶ For example, experiences are—in Kant’s usage of the expression ‘experience’—only possible when we think a necessary connection among perceptions (cf. B218–9). In experiences we represent “the necessity of the combined existence of the appearances” (B219), that is, we think, by means of our pure concepts of the intellect, of existing appearances as being connected in objective time (cf. B218–9, A176–7). But, for Kant, the objective order of time, in which we think the relations between existing appearances, always needs to be—in a way that varies according to the particular category employed—related to the way in which we are perceptually acquainted with these appearances.⁷ Now, since this way of being acquainted might be non-conceptual, experiences are also possible candidates for non-conceptual content (although it contains at least the conceptual content through which we think the perceived thing to exist in an order of time that is independent of a subject’s order of apprehension). *Experiences* thus are candidates for non-conceptual content just insofar as we can still speak of a non-conceptual content involved in our representations when these representations have already been synthesised by an act guided by a *synthesis intellectualis*.

⁵ Kant uses ‘perception’ in various meanings. A perception can be a “perception of an object” (B41), the “perception of a being” (A41/B58; translation amended), which I take to be more or less the same as *empirical intuition*, or it can be what Kant calls *perceptio*, by which he indicates a merely subjective state (A320/B376).

⁶ Whether we should really read them as non-conceptual representations is of course contested. There are passages where Kant speaks of pure and empirical intuitions as if their relation to an object is based on concepts of the pure intellect (cf. B203), in contrast to those in which he assigns a relation to an object to them that is autonomous of, or prior to, concepts (cf. A19/B33). *Images* are intuitions that are ready-to-be-subsumed under particular concepts (cf. A140–1/B179–80), and *schemata* are sensible rules (for concept-subsuming) in accordance with our conceptual thinking (cf. A141/B180). Images and schemata can thus only count as non-conceptual if a conceptualised sensible intuition and the sensible rule-like basis for our conceptual cognition of sensible objects is in some way based on an autonomous and irreducible non-conceptual representational capacity. As mentioned above, this is only a compilation of candidates for non-conceptual content within Kant’s First *Critique* and not within his theoretical philosophy as a whole. There are more such candidates when we broaden our focus to the issues in the Third *Critique*. Heidemann (2016) highlights the importance of non-conceptuality with respect to Kant’s Third *Critique*, analysing the cognitive appreciation of the beautiful, which leads to judgements of taste, on the one hand, as well as the aesthetic creation of the genius of art, on the other hand, as essentially having non-conceptual character. Schlösser (2015:31) identifies in Kant’s theory of *Mittelbarkeit* in the Third *Critique* a sense of communicability which remains in some way sensible, and which is not identifiable with the communicability inhering in the acts of judging.

⁷ For example, when we determine alterations in the manifold of appearances according to the concept of causality, we think of our cognitive states in such a way that we “derive the subjective sequence of apprehension from the objective sequence of appearances” (A193/B238).

If we understand the non-conceptualist viewpoint as maintaining that *sensibility alone is sufficient for yielding a legitimate sense of objectivity*, the following question is still worth considering: Can we also speak of non-conceptual elements in the content of an intellectually synthesised representation? If we answer this question with “yes”, then possible candidates for representations with non-conceptual content are not only intellectually unsynthesised representations, but also some representations which are supplied with a conceptual unity. The content of such a representation would then not only be composed of conceptual elements, but also still contain a specific non-conceptual sense of objectivity. According to this view, conceptualised sensible intuitions must always retain a fundamental sense of non-conceptuality, be it because some concepts are based on non-conceptual capacities (like sensible concepts), be it that some concepts depend on non-conceptual content in order to have a bearing on reality (like the categories). Let us call this thesis *the non-conceptual constraint on realised conceptual cognition*.⁸ I propose such a reading⁹ in the following, trying to clarify the relation of the essential and original non-conceptuality of time (and space) to conceptual determinations of the temporal (and spatial) manifold.

Recent contributions to the discussion on how to understand adequately Kant’s theoretical philosophy, that is, either in a conceptualist or in a non-conceptualist way, do, on the non-conceptualist side, primarily focus on the specific nature of pure intuitions (e.g., Allais 2009; McLear 2015; Onof and Schulting 2015). In fact, Kant does not only provide for the possibility for such a reading at a prominent place inside the *First Critique*, that is, in the *Transcendental Aesthetic* (A19/B33 ff.), by maintaining that space and time are originally intuitive, and not conceptual in nature (B40: “Therefore the original representation of space is an a priori intuition, not a concept”), but the representations of space and time are also specifically identified as “principles of sensibility” (A21/B35). In being such principles, space and time constitute the comprehensive structure of human sensibility, the “form of appearances” (A22/B36). As *formal constituents* of all sensible representations, their content is accordingly contained in all empirically given sensible content. If perceptions (i.e., *empirical intuitions*; A20/B34) are first given within this formal structure, and this formal structure is originally non-conceptual, then it seems to be implausible to think of perceptions as anything other than primarily non-conceptual representations, since they would have representational content the constituents of which are essentially and originally non-conceptual. Let’s call this latter relation the thesis of the *primacy of pure non-conceptual content*.

In the following, I try to develop a reading of Kant’s theory of temporal (and spatial) representation drawing mainly on the three major theses developed in this introduction: The thesis that *sensibility alone is sufficient for yielding a legitimate sense of objectivity*; the thesis of *the non-conceptual constraint on realised conceptual cognition*; and the thesis of *the primacy of pure non-con-*

⁸ For Kant, not all conceptual cognitions are sensibly realised. As Kant indicates in the Schematism chapter, “the schemata of sensibility first realise the categories, yet they likewise also restrict them” (A146/B185–6). The structures of human sensible representation need to be included in the representational content, by which we cognise the world by means of pure concepts of the understanding, in order for the latter to have a bearing on reality. The problem of conceptual (pure intellectual) cognition is that it can be like a “fog bank” or a “rapidly melting iceberg” that pretend to be “new lands” (A235/B295), when we disregard the role non-conceptual representational structures play in the realisation of conceptual cognition.

⁹ A theory along the lines explained is proposed by Hanna: “The bottom-up theory I am proposing, then, is that essentially non-conceptual content and non-conceptual cognition are not only presupposed by all conceptual content and concept-driven cognition, but also that the former grounds the latter in the strong metaphysical sense that the essentially non-conceptual partially constitutes the conceptual. Otherwise put, my claim is that the conceptual side of human minded-ness cannot secure directly referential veridicality or world-connectedness and world-situatedness on its own, so the essentially non-conceptual independently and autonomously does this for it” (2015:24–5, and see Ch. 2). If I correctly understand Hanna on this point, we have to think of non-conceptual content as not only being involved in unsynthesised cognition (in the Kantian sense), but also involved in conceptual cognition, insofar as the conceptual cognition is brought to bear on directly world-related states, i.e., human sensible intuitions. Conceptualised intuitions, in the Kantian sense, are thus also possible candidates for representations with non-conceptual content.

ceptual content. In doing so, I address two interpretative issues in the context of Kant’s theory of temporal and spatial representation:

1. How can we understand time (and space) as being essentially non-conceptual but also as being in a certain way *determined* representations?—Since if space and time were originally non-conceptual and formal structures of our perceptions, they need to reveal a way in which they formally determine perceptions’ access to objects.
2. How should we understand the nature of time, and space, as ‘formal intuitions’?—Here I try to point out the way in which the formal intuitions remain non-conceptual representations in spite of their intellectual determination.

These two questions will be addressed in Sections 2 and 3 respectively. I shall focus on giving an exegetically defensible non-conceptualist reading of these issues in Kant, rather than on arguing against conceptualist interpretations.

2. A Non-Conceptual Sense of Determination

In this section, I point out how we must think of time (and space) as purely sensible and non-intellectually synthesised intuitions. In doing so, I maintain that there is a certain sense in which the pure spatiotemporal manifold is represented (or has representational relevance) which is independent of and prior to conceptual considerations of spatiotemporal features. In what follows in this section, I shall therefore briefly present three arguments that are discussed in the contemporary debate, and that speak in favour of the existence of pure, spatiotemporal, non-conceptual content. On the basis of these arguments, I think we can justifiably speak of a determination of time and space *per se*—that is, a sensible sense of determination, which is inherent in space and time taken as non-intellectually synthesised intuitions (as “principles of *a priori* sensibility”; A21/B35).

2.1 *Three arguments in favour of spatiotemporal, non-conceptual content*

In what follows, I present three arguments in order to introduce and explain what has to be understood as a non-conceptual sense of determination: I call them (i) the argument from infinity; (ii) the argument from the grounding of geometrical cognition; and (iii) the argument from incongruent counterparts. They are all based on Kant’s thought that sensibility *a priori* is a non-reducible¹⁰ and in principle isolable¹¹ element of the human mind’s faculties for cognition.

THE ARGUMENT FROM INFINITY: Space and time are both representations of an unlimited magnitude. Several authors have already directed our attention to the discrepancy between (1) a representational content that is constituted by an unlimited intellect-guided quantitative synthesis, and (2) an intuitional sense of infinity (see, e.g., McLear 2015 and Onof and Schulting 2015). The first side of this distinction mainly draws on Kant’s characterisation of quantitative synthesis in the Axioms of Intuition. Kant points out that an intuition can only be represented as quantitatively determinate by means of

the synthesis of the manifold through which the representations of a determinate space or time are generated, i.e., through the composition of that which is homogeneous and the consciousness of the synthetic unity of this manifold (of the homogeneous). (B202–3)

¹⁰ Kant argues against Leibniz from the standpoint of a non-reducible content-element of our human sensible form of intuition: “The conditions of sensibility, which *bring with them their own distinctions*, [Leibniz] did not regard as original; for sensibility was only a confused kind of representations for him, and not a special source of representations” (A270/B326, my emphasis).

¹¹ Cf. A22/B36.

For Kant, quantitatively determinate extensive magnitudes must be constituted such that “the representation of the parts makes possible the representation of the whole (and therefore necessarily precedes the latter)” (A162/B203).¹² In the proof for the thesis¹³ of the First Antinomy Kant refers to a meaning of infinity which draws on the aforementioned quantitative synthesis:

Now we can think of the magnitude of a quantum that is not given as within certain boundaries of intuition in no other way than by the synthesis of its parts, and we can think of the totality of such a quantum only through the completed synthesis, or through the repeated addition of units to each other. Accordingly, in order to think the world that fills all space as a whole, the successive synthesis of the parts of an infinite world would have to be regarded as completed, [...] which is impossible. (A426/B454 and A428/B456)

Since space and time are not given within “certain boundaries of intuition” (A426/B454) we can only *think* of the whole of space and the whole of time as a quantum by means of assuming a completed synthesis. The synthesis we are dealing with here is the intellectual synthesis, which consists in the “addition of units to each other” (A428/B456), and for which the completion of this addition is equivalent to cognising something as a totality. For the human mind that applies such a synthesis to the manifold of space or time, however, such a completion stays beyond reach, and has to be thought of more like an idea of pure reason (cf. A334/B391).

This way of constituting space and time as determinate magnitudes stands in sharp contrast to the way Kant refers to space and time in the Transcendental Aesthetic, especially in the fifth article on space (fourth article according to the B-edition) and time, respectively:

The infinitude of time signifies nothing more than that every determinate magnitude of time is only possible through limitations of a single time [*einer einigen Zeit*] grounding it. The original representation, time, must therefore be given as unlimited [*uneingeschränkt*]. But where the parts themselves and every magnitude of an object can be determinately represented only through limitation, there the entire representation cannot be given through concepts (for then the partial representations precede) but their immediate intuition must be the ground. (A32/B47–8)

This fifth article on time argues for the original intuitive nature of our representation of time. Time as an “entire” representation is single (*einig*) and unlimited (*uneingeschränkt*). The original representation of time as a single and unlimited whole not only carries with it a different part-whole relation than the one invoked in quantitative synthesis, rather—and this is, according to my reading, Kant’s major point—for every limited temporal representation which can figure as the basis for a determinate representation of temporal magnitude by means of quantitative synthesis the unlimited single and originally intuitive representation of time is presupposed.

The original intuition of time (and of space) thus carries with itself a certain *sense of ne-*

¹² See Onof and Schulting, who write the following: “The *quantitas* (quantity) of such a magnitude (*quantum*) is determined through the synthesis of composition (that is, one of aggregation; B201n), which can be completed only for finite magnitudes. It is therefore not possible to cognize an infinite object. What conceptual thought can do, however, is to consider ‘the synthesis of a series insofar as it is never complete’ (A510/B538), that is, to consider the concept of a potential infinite defined through the notion of *progressus in indefinitum* (A511/B539)” (Onof and Schulting 2015:38).

¹³ The antithesis to the First Antinomy seems, however, to include an intuitional sense of the unboundedness of space and time (cf. A427/B455).

cessity, in which time shows itself as a necessary single and unlimited representation. I call this *the specific sense of non-conceptual infinity*.¹⁴ In any limited temporal episode to which we (as intellect) are able to attend we are confronted with this sense of necessity. This presents itself in intuition; that is, the temporal episode in question is intuitionally (affectively) regarded as a limitation of a necessary single and unlimited time to which all temporal episodes a priori belong. The thus-constituted sense of necessity is not reducible to our functions of judgement and thus not constituted by our a priori conceptual capacities. It is important to point out here that the status of the necessity in question is not just one of a precondition for intellectually guided activities. According to the non-conceptualist reading I am proposing, the sense of necessity involved here is also included in our sensible representations even if they are not picked out as a theme¹⁵ by the intellect. This necessity must be thought of as inhering in human sensibility and it is the basis for what can be expressed by synthetic a priori judgements¹⁶—insofar as they are possible for the human mind.

THE ARGUMENT FROM THE GROUNDING OF GEOMETRICAL COGNITION: A second argument in favour of the thesis that space and time are furnished with non-conceptually determinate content draws on Kant's philosophy of mathematics. Kant's theory of mathematics contains three major elements—as Kant points out in the Doctrine of Method: definitions; axioms; and demonstrations (cf. A726/B754).

Constructions of mathematical concepts are real definitions: before a concept is defined there are no mathematical objects, and the definition of the concept is itself a presentation in pure intuition (cf. A240/B300). And since pure intuition in Kant is always an integrative part of human sensibility, the object of a mathematical concept is, from its generation by means of the definition onwards, a sensible object: it is “present to the senses (even though brought about a priori)” (A240/B299). Kant calls this act of presenting the object (that is according to a mathematical concept) in a pure intuition “the construction of concepts” (A713/B741).

Now, insofar as the objects of mathematical concepts are directly given in a sensible but a priori spatiotemporal intuition, we can, according to Kant, articulate “synthetic a priori principles, insofar as they are immediately certain” (A732/B760); such principles are *axioms*. The characteristics, which are expressed in the axiom are, in virtue of being a synthetic judgement, not analytically deducible, but their immediate presence in pure sensibility renders their combination necessary. Their combination is immediately evident not in the way of discursive thought but in the way of spatiotemporal intuition. One of Kant's examples for such an axiom is “that three points always lie in a plane” (A732/B761).

Finally, mathematical concepts need to be constructed in order to convey a demonstration. Demonstration in Kant is not a formal-discursive method, but a proof that is only possible by means of the instantiation of the mathematical concept. It is “an apodictic proof, insofar as it is intuitive”, and considers “the universal *in concreto* (in the individual intuition) and yet through pure a priori intuition, where every false step becomes visible” (A734-5/B762-3).

In Kant's exposition of these three essential elements of his philosophy of mathematics,

¹⁴ When we leave the scope of theoretical philosophy in the narrow sense, it would be interesting to ask how this sensible sense of infinity connects with Kant's considerations of the mathematically sublime in his *Third Critique* (cf. KU, 5:248ff.).

¹⁵ This usage of “theme” is inspired by Kant's explanation: “In every cognition of an object there is, namely, unity of the concept, which one can call qualitative unity insofar as by that only the unity of the comprehension of the manifold of cognition is thought, as, say, the unity of the theme of a play, a speech, or a fable” (B144).

¹⁶ I particularly have in mind here the sense of necessity involved in mathematical (geometrical) cognition. If this necessity is based on a non-conceptually given spatial representation, we can also think of cognitions expressing a sense of necessity involved in our representation of time, as Kant does, according to my reading, when he speaks of the “possibility of apodictic principles of the relations of time, or axioms of time in general” (A31/B47).

the essential point lies in the particular constraint of all mathematical information by the sensible immediacy provided via the forms of intuition, space and time. In mathematical (geometrical) definitions, axioms, and proofs, we experience a certain *pure spatiotemporal constraint* that grounds our mathematical concepts, judgements, and demonstrations. This constraint is not constituted through conceptualisation, it is rather presupposed as a sense of necessity involved in every sensible representation we have.

THE ARGUMENT FROM INCONGRUENT COUNTERPARTS: Kant's famous "incongruent counterparts" argument is given at several stages in Kant's development from his proto-Critical works, starting in 1768, to his Critical works (important passages are GUGR, 2:377–83; MSI, 2:385–419; Prol, 4:283–6, 4:483–4; WDO, 8:131–47, however it is not given in the First Critique). Incongruent counterparts are qualitatively identical but they cannot be enclosed within the same spatial (and temporal) limits.¹⁷ Kant uses the counterparts example mostly (explicitly or implicitly) in order to criticise the Leibnizian doctrine which states that sensibility is only a subordinated faculty with respect to the intellect and that the intellect has to make the confused, sensible representation distinct by means of conceptualisation (cf. A43/B60–1). For Kant, the "Leibnizian-Wolffian" (A44/B61) philosophical tradition mistakenly assigns the capacity for distinct representation to the intellect, and the capacity for confused representation to sensibility, as is shown by Kant's discussion of the concept of "right" in the Transcendental Aesthetic (A43–4/B61). Whereas Kant understands the "difference between an indistinct and a distinct representation" as a "merely logical" (A43/B60–1) difference, he maintains that the "distinction between sensibility and the intellectual [...] is obviously transcendental" (A44/B61). In the counterparts argument, Kant maintains that there are concepts "which can certainly be constructed, but, as a concept, can in no way be made clear [*deutlich*] in itself by means of universal characteristics and in the discursive mode of cognition" (MAN, 4:484). If all of our concepts cannot discursively describe a certain difference in a distinct¹⁸ but only in a confused or indistinct way, and when we can nevertheless represent the difference in question in a distinct way by means of constructing a concept in pure *sensible* intuition, then the fundamental claim of the "Leibnizian-Wolffian philosophy" (A44/B61) is flawed.

In fact, Kant states, "this difference can certainly be given in intuition, but can in no way be captured in clear concepts [*deutliche Begriffe*], and thus cannot be rationally explicated [*verständlich erklären*] (*dari, non intelli*gi)" (MAN, 4:484). The incongruent counterparts argument thus leads us to conclude that for Kant sensibility can provide the human mind with a particular *sense of distinctness*, for which the understanding, that is, our capacity for conceptual cognition, essentially cannot be responsible. One may object here that even if there really were non-conceptual content in an important sense, such that there is representational content, which is irreducible to our conceptual capacities, the non-conceptual contribution can only be made distinct relative to conceptually informed cognition. My answer to this is that conceptual cognition can help with the intellectual focus and the conceptual description of the content in question, but since it is an *a priori* content that cannot be fully made distinct by concepts, the distinctness of this content must be based on our non-rational *lower* capacity, and if concepts cannot help in making the content distinct, it seems consistent to attribute this sense of distinctness also to an autonomous sensible representation.

2.2 A mismatch of different kinds of determination

The three arguments expounded in the last subsection all point towards one conclusion: spatiotemporality has *in and of itself* (as original, sensible, and non-conceptual representation)

¹⁷ Hanna (2015), Ch. 2.5, gives an overview of the different uses of the incongruent counterparts argument and also provides an interesting proposal about how we could understand *temporal* incongruence (i.e., temporal asymmetry or irreversibility, "time's arrow") as an analogue to the spatially conceived incongruent counterparts examples that Kant gives.

¹⁸ The German word *deutlich* should be translated as "distinct", not as "clear".

a rich determination.¹⁹ This determination contains a necessary sense with which we represent their single and unlimited nature, with which we represent the distinctness of the differences that are ingrained in them, and which constrains our mathematical concepts and our mathematically evident judgements. I thus want to claim that the original representations of time and space are themselves *non-conceptually determinate representations*.

Calling a non-conceptually present representation *determinate* is, however, *prima facie* not unequivocal, since Kant mostly uses the term ‘determinate’ in the sense of ‘conceptual or intellectual determination’. Kant’s use of ‘determination’, as a look at a passage from the *Jäsche Logic* shows, can vary:

Since only individual things, or individuals, are thoroughly determinate, there can be thoroughly determinate cognition only as *intuition*, but not as *concepts*; in regard to the latter, logical determination can never be regarded as completed. (Log, 9:99)

If this passage from the *Jäsche Logic* reflects Kant’s own conviction (and, in fact, similar thoughts can be found in the *First Critique*, e.g., at A655–6/B683–4), we have to distinguish between two equivocal uses of the term ‘determination’. In the section on the Transcendental Ideal Kant speaks of a “principle of thoroughgoing determination” (A571/B599), by which we have to think the object in a way in which of all possible pairs of opposite objective predicates, one must apply in each case to the object in question (cf. A573/B601). Thinking an object as thoroughly determined is for Kant “grounded in an idea” and cannot be given *in concreto* (A573/B601). The thoroughgoing determination of an object can therefore never be achieved in its totality for a human mind. This sense of ‘determination’ is oriented towards our conceptual capacity and can be identified with *conceptual (intellectual) determination*. Every sensibly given object (*in concreto*), even if conceptualised, can *in principle* always be subject to further conceptual determinations.²⁰ Every concept is a *representatio generalis*, which must always allow for further conceptual specification. If the object is thought to be conceptually “thoroughly determinate” then its individuality must be thought as an infinite task, that is, a representation of pure reason (*Vernunftidee*),²¹ and not as something that is fundamental (constitutive) for the objects of our experience.

However, the above-cited passage from the *Jäsche Logic* does take thorough determination on the intellectual side to be an infinite task. By contrast, Kant points towards the possibility of cognising a thoroughly determinate object by means of intuition. I understand Kant on this point in the following way: the sensible side of cognition supplies the elements of determination that are sufficient for individuality.²² It follows that the expression of ‘thorough determination’ of an intuitional object does not refer to the conceptual sense of ‘determination’. There must be a specifically non-conceptual, sensible, or aesthetic sense of ‘determination’ involved in Kant’s consideration.

¹⁹ I think Onof and Schulting point to the same fact when they say: “[T]hat we are able to form such a rich concept of space is evidence of an intimate phenomenological acquaintance with space” (Onof and Schulting 2015:40).

²⁰ The question of how the assumption that all things are thoroughly determinate (“the thoroughgoing determination of everything rests on the limitation of this All of reality, in that some of it is ascribed to the thing and the rest excluded from it”, A577/B605) leads to antinomies must be left aside here.

²¹ See also Onof and Schulting (2015:50–1) on the claim that space as a particular is necessarily underdetermined by conceptual determination.

²² It might be objected that “intuition” in the passage above has nothing to do with Kant’s concept of “sensible intuition” in the *First Critique*. I cannot rule out this possibility. However, the fact that Kant takes up the theory of individuation in the Amphiboly chapter (cf. A260/B316ff., esp. A263/B319–20 and A271/B327–8) and assigns to our pure forms of intuition an individuating function (“The difference in place already makes the multiplicity and distinction of objects as appearances not only possible in itself but also necessary”; A272/B328) suggests that the intuition in question is meant to be a sensible one.

I make use of this sense in order to speak of space and time as essentially non-conceptual and determinate representations *per se*. Space and time are pure forms of intuition, but they are not indeterminate, as they ground a necessity involved in human sensible representations, which we use, for example, for representing individuality without thoroughgoing conceptual determination. The sensibly determinate pure forms of intuition also ground the senses of infinity and of orientable directional differences (up-down, right-left, back-front, etc.) as well as the constraint for geometrical concept formation, axioms and demonstrations. It also makes sense to speak of our representations of incongruent counterparts as having different determinate content. My left and my right hand have a different sensible determination,²³ whereas they remain conceptually determined in the same way.

Sensible objects can, on the other hand, also be called determined in a conceptual sense. The first step of the B-Deduction is concerned with *synthesis intellectualis* and the question of how pure concepts of the understanding can have objective validity for a given (sensible) manifold in general. At this place in the First *Critique* Kant offers his theory of a thinker's relation towards a given (sensible) manifold. The famous passage at §16 points out that the "I think must be able to accompany all my representations; for otherwise something would be represented in me that could not be thought at all" (B131–2). This sentence points towards the "principle of the synthetic unity of apperception" as the "supreme principle of all use of the understanding" (B136). In order for a given manifold of a sensible intuition to stand under the conditions of transcendental apperception, it must be unified by a function of the understanding, that is, if the manifold is to be a proper object for the understanding ("become an object for me", B138)²⁴ it must be thought *as an "objective unity"* (B139), which is the only way for the understanding to enable a necessary "thoroughgoing identity of self-consciousness" (B135). The understanding must "synthetically bring about a determinate combination of the given manifold, so that the unity of this action is at the same time the unity of consciousness" (B138), and thus bring about cognitions, which "consist in the determinate relation of given representations to an object" (B137). Conceptual cognition in a proper sense and in relation to a given (sensible) manifold in general—as is supposed in the first step of the B-Deduction—therefore consists in this act of unification of this manifold which at the same time guarantees the thinker's own thoroughgoing identity as it (logically or conceptually) *determines* the particular relation in which the given manifold stands to the object of thought (the object to which we apply predicates).

In order to have a proper cognition (in the intellectual sense) we are in need of a thoroughgoing act of unification, which makes possible both the thoroughgoing identity of the thinking subject and the determinate relation the given manifold has to the object. Let's call this element of Kantian thought the *intellectual kind of determination by means of synthesis intellectualis*.

We are thus confronted here with a mismatch between the two distinguishable senses of 'determination'. If the determination by means of *synthesis intellectualis* is in fact the highest principle of all use of the understanding, and thus the ground of all properly understood conceptual cognition, and if conceptual cognition, without an originally sensible contribution, is not sufficient for representing determinate individuality to the human mind, then the determinate sensible intuition *in principle* does not fully match the intellectual kind of determination by means of *synthesis intellectualis*.

²³ For Hanna, the differences between the left and the right hand are "directly and veridically perceived real properties" of these objects, which are "necessarily and constitutively, non-conceptually represented" (2015:72). They belong, according to the reading I have outlined, to an intuitively determined content (since they are in some way constitutive for the object), though they do not belong to the way we think the determinacy of the object by means of concepts.

²⁴ I take the expressions 'me' and 'I' in Kant's considerations in the First *Critique* to indicate the intellect's role in cognition, and I further take the intellect (or 'I') to be non-interchangeable with Kant's concept of the human mind—as in *Gemüt* (cf. e.g., A20/B34).

A human sensible representation (as pure or empirical human intuition) always *contains*—in a certain sense—more determinations than those that make it homogeneous, or uniform, to the conceptual representation for which it is a possible application.²⁵ In the chapter on the Schematism Kant says: “No image of a triangle would ever be adequate to the concept of it. [...] Even less does an object of experience or an image of it ever reach the empirical concept” (A141/B180). Here he maintains that a pure or an empirical intuition, in immediately representing an individual object, cannot justifiably ‘stand for’ all other objects to which the same concept applies. The ‘image’ is always richer in characteristics than the concept of it—be it pure or empirical, as long as it is sensible.²⁶ That is, even if *synthesis intellectualis* determines a spatiotemporally given intuition (by means of transcendental synthesis of imagination or self-affection; see B151ff.), the non-conceptually determinate intuition is not grasped conceptually in a full sense: there remains a richness of perceptual and pure intuitional determination non-conceptualised, or, there will necessarily be a mismatch or a *blind spot*.

In his recent book on Kant, Alfredo Ferrarin (2015) sheds some light on Kant’s conception of ‘blindness’ (see A51/B75, A78/B103, A112). Ferrarin points to the fact that, on the one hand, thought, for Kant, is essentially an activity of synthesis. Synthesis and unification are a pure spontaneity (Ferrarin 2015:113). In being nothing else than functions of pure spontaneity, in not being able to account on their own for intuitions, the categories are, taken independently of sensibility, *empty* functions (in the sense that they do not account themselves for proper cognition). This stands in sharp contrast to “classical Greek thinking”, where “intuition had a noetic connotation. In and through a thing you see an *eidōs* [...], an essence or form” (Ferrarin 2015:110). According to Ferrarin, Kant thus relieves the intellect from the task of *seeing* essences on its own. On the other hand, however, insofar as intuition is ascribed to sensibility, the essences of the things still cannot be intuited by means of a sensible intuition alone, the understanding cannot simply pick up the images and essences of the things from sensibility: “The concept cannot be the skimmed or filtered result of an image that is itself a supposed copy of the percept” (Ferrarin 2015:114). Thus, if I understand Ferrarin correctly on this point, the intellect on its own, that is, without sensibility, is only an *empty* function, it does not *see* on its own, and can only cognise something in relation to sensibility. But the intellect cannot cognise something in sensibility by means of passively taking in the essences: it is constrained to unify a manifold. Now, insofar as sensibility does not provide the information for the intellect without the latter’s function of synthesis at work in the manifold itself, sensibility is *blind*. If this reading is correct, and the blindness of sensibility has to be understood in terms of an intuitional capacity that is heterogeneous to the intellect, it does not follow that sensibility has no representational relevance, considered on its own, for the human mind.

Sensibility is blind insofar as it does not provide the intellect with representations that it can directly (without a spontaneous act of the understanding) intuit. In our case, the richness of perceptual and pure intuitional representations, which do not directly match the intellectual kind of determination, can therefore be called the ‘blind aspect’ of a sensible representation. This does not mean that these representations are representationally irrelevant for the human mind. They are just not fully meaningful for the discursive and conceptual capacity of the understanding. Among these ‘blind spots’ I count, for example,

²⁵ Here I am alluding to the difference between conceptual (analytic) relations on the one hand—such as that conceptual cognition indicates not only what is *contained in* a concept (as other concepts which are part of the concept’s intension) but also what is *contained under* a concept, which are its conceptual specifications (the concept’s extension)—and intuitional containment, which indicates an intuition’s mereological containment of spatial (or temporal) parts in spatial (temporal) wholes, or the containment of spatial (or temporal) subparts in spatial (temporal) parts that is a sign of their homogeneity and continuity.

²⁶ That is why the instantiation required for mathematical demonstration is not really a particular image, but the schema of the mathematical concept (see A142/B181).

the above-mentioned sense of infinity and the distinction of orientation in incongruent counterparts. Let's call these latter even *essentially blind spots*, since their distinctness lies a priori on the side of sensibility and not even potentially on the side of the understanding. Other mismatches between characteristics of a sensibly given intuitional individual and a particular intellectual determination might then be called 'accidentally blind spots'. This blindness, or mismatch, does not mean that the intuition in question has *only indeterminate* additional elements, nor does it mean that those elements do not involve a sense of *distinctness* in their representation, nor does it mean that the additional elements of their content are not *content* at all. On the contrary, they can still be part of representational content, it is just they are not conceptually grasped in a full manner (*non intelligi*).

3. Form of Intuition and Formal Intuition

3.1 Conditions with a different transcendental *topos*

According to the two distinguishable levels of determination, we also have to discriminate between two different aspects of conditionality that are prevalent in the B-Deduction:

The supreme principle of the possibility of all intuition in relation to sensibility was, according to the Transcendental Aesthetic, that all the manifold of sensibility stand under the formal conditions of space and time. *The supreme principle of all intuition in relation to the understanding is that all the manifold of intuition stand under conditions of the original synthetic unity of apperception.* (B136; emphasis added)

Kant describes a sensible condition as well as an intellectual condition:

- A. The characteristics of our human form of sensibility (space and time) are immediate conditions for everything that can be given as a sensible intuition.
- B. Everything that is to be an intuitional manifold for our intellect must be brought under the "original synthetic unity of apperception" (B136).

Ad A. The representations of space and time as forms of intuition are exactly what 'form of intuition' expresses: they are "formal conditions" for "all the manifold of sensibility" (B136). Space and time are according to Kant's cognitive dualism "principles of sensibility" (A21/B35), that is, they are "subjective condition[s] under which alone we can acquire [...] intuition" (A26/B42). Kant indicates in the beginning of the Transcendental Deduction that "an object can appear to us only by means of such pure forms of sensibility", and that space and time "contain a priori the conditions of the possibility of objects as appearances" (A89/B121–2). The conditionality of the representations of space and time for every sensible manifold thus not only lies in their apriority, but also in their *transcendental-topical*²⁷ affiliation to sensibility. They are conditions for the acquisition of sensible intuitions, and for the appearance of objects in sensible intuitions. The conditionality of space and time for the manifold of human experience does not have to be established in the Transcendental Deduction.²⁸ All manifold of appearances is affectively *given* in a comprehensive spatiotemporal framework.

Ad B. The "original synthetic unity of apperception", on the other hand, does "not rep-

²⁷ See A268/B324 where Kant calls the assignment of representations to either sensibility or the understanding a "transcendental topic": "a doctrine that would thoroughly protect against false pretences of the pure understanding".

²⁸ The conditionality of time and space for the manifold of appearances does not have to be established by any *act* of the human mind at all. The Transcendental Aesthetic only *uncovers* the sensible origin of the representations of space and time and shows that they figure as "pure forms of sensible intuition" and as "principles of a priori cognition" (A22/B36).

resent to us the conditions under which objects are given in intuition at all” (A89/B122). The unity of apperception is a condition in order for something to be grasped by the intellect. This unity is not something that presents itself in intuition so that the intellect can absorb it as it is, passively. The intellect, on the contrary, has to bring about this unity; it has to furnish a given manifold with an objective unity. Since the categories, as moments of the functions that constitute the objective and synthetic unity of apperception, have their transcendental-topical affiliation to the intellect and not to human sensibility (cf. A80/B106), their relation to the manifold of human sensibility is, at first, a problem. It is, therefore, a very different sort of conditionality than the one expressed for space and time.

A and B are thus expressions of conditionalities on different levels. The manifold of human sensibility does not have to be brought under the conditions of space and time, as it is the case with the intellectual condition. The intuitions of a human minded animal are already furnished with the sensible form, there is no special act needed to mediate between them. By contrast, explaining the particular conditionality of the intellect B is the *problem* of the Transcendental Deduction. In the B-Deduction, Kant approaches this problem in posing two different questions:

(1) How can the intellect be a condition for any given (sensible) manifold of intuition? The answer to this question—if I am allowed to speak broadly—is that the intellect, in order to make sense of the manifold, has to establish the manifold’s determinate relation to an object. In order to do this, the intellect, by means of its functions (the categories), establishes the way in which a given manifold stands in relation to the object of thought. This act of the intellect’s spontaneity, furthermore, consists at the same time in the thinker’s necessary and thoroughgoing identity throughout the moments of the act of combination (cf. B133).

After answering this first question, a second question must be asked: (2) How can this sense of conditionality be implemented for an intuitional manifold that possesses its own sensible a priori conditions?²⁹ Those two questions are addressed in the first and in the second step of the B-Deduction respectively, and only in answering also the second question the validity of the categories can be limited a priori.³⁰ Without going into more detail concerning this two-step structure of the B-Deduction, I want to point out that the second question can additionally be asked only if the sensible sense of conditionality is already presupposed.

3.2 Formal intuition as an inclusive representation

The two distinct levels of a determinate sensible (intuitional) representation, that is, (1) the non-conceptual determination, and (2) the conceptual determination by means of *synthesis intellectualis* (an action that guarantees the thinker’s own thoroughgoing identity as it determines the particular relation in which a given manifold stands to a thought object), together with the two distinct aspects of conditionality for an intuitional representation, that is, (A) the immediate condition on the side of sensibility, and (B) the condition on the side of the intellect that is to be established by means of an action of synthesis, give now rise to a straightforward interpretation of the *form of intuition/formal intuition* distinction that occurs in the second step of the B-Deduction (§26).

Kant introduces the distinction in question in a footnote at B160–1. Chris Onof and Dennis Schulting (2015) give an in-depth analysis of the interpretative problems that arise from Kant’s explanations there. I shall not, for the present purpose, consider the many issues that the footnote-text raises, although my reading of the *form of intuition/formal intuition*

²⁹ As Kant explains in §21, he first had to abstract from “the way in which the manifold for an empirical intuition is given” (B144). With this “way” Kant indicates the a priori form of human sensibility, space and time.

³⁰ Cf. §21 (B144–5) and the beginning of §24 (B150–1) of the B-Deduction for this two-step-structure (§§15–20/§§22–27), and the beginning of §23 for the introduction of the theme of the “boundaries of the use of the pure concepts of the understanding” to the argument of the B-Deduction (B148).

distinction would have immediate consequences for understanding Kant’s explanations there. I shall, though, discuss the passage in which the footnote occurs:

We have forms of outer as well as inner sensible intuition a priori in the representations of space and time, and the synthesis of the apprehension of the manifold of appearance *must always be in agreement with the latter*, since it can only occur *in accordance with this form*. But space and time are represented a priori not merely as forms of sensible intuition, but also as intuitions themselves (which contain a manifold), and thus with the determination of the unity of this manifold in them (see transcendental aesthetic). [footnote] Thus even unity of the synthesis of the manifold, outside or within us, hence also a combination with which everything that is to be represented as determined in space or time must agree, is already given a priori, along with (not in) these intuitions, as *conditions of the synthesis of all apprehension*. But this synthetic unity can be none other than that of the combination of the manifold of a given intuition in general in an original consciousness *in agreement with the categories*, only applied to our sensible intuition. (B160–1; emphasis added)

Kant explains here the work of the synthesis of apprehension, which, in the present context of the B-Deduction, must be understood as a synthetic activity of the imagination. As I have already pointed out in the introduction of this paper, insofar as the synthesis of imagination is thought to lead to a conceptual unification of the spatiotemporally given manifold, this action of synthesis must be identical with what Kant calls the “transcendental synthesis of imagination”.³¹

According to the cited passage, the imagination (the synthesis of apprehension when it functions as transcendental synthesis of imagination) has a very particular task: On the one hand, it needs to combine a representational manifold that is given in the human way of sensibility. It has to “be in agreement” with the “forms of outer as well as inner sensible intuition a priori”, which are space and time as formal principles of human sensibility. The synthesis of imagination needs to “occur in accordance with this form”. On the other hand, as Kant says, the distinction between space and time “as forms of sensible intuition”, and space and time “as intuitions themselves” (*formal intuitions*) which are furnished “with the determination of the unity of this manifold in them”, a priori allows the synthesis of imagination to not only take up the manifold to be combined in accordance with the forms of sensibility, but also in accordance with a determinate unity. The determinate unity is a unity of a synthetic act of the intellect’s spontaneity, a “synthetic unity”, and, in being “none other than that [unity] of the combination of the manifold of a given intuition in general in an original consciousness”, it stands in agreement with *synthesis intellectualis*.³²

As the exegesis of the passage from B160–1 shows, the two different senses of ‘determi-

³¹ Kant introduces the transcendental synthesis of imagination as follows: “Yet the figurative synthesis, if it pertains merely to the original synthetic unity of apperception, i.e., this transcendental unity, which is thought in the categories, must be called, as distinct from the merely intellectual combination, the transcendental synthesis of the imagination” (B151). Following this passage, I think we can make a threefold distinction between aspects of synthesis in Kant’s B-Deduction: (1) the *synthesis intellectualis* which establishes the objective unity of an intuition in general, i.e., the way we bring a manifold under the conditions of the transcendental unity of apperception. (2) The transcendental synthesis of imagination (an action by *synthesis speciosa*), which synthesises the manifold within the non-conceptual constraints of our spatiotemporal sensibility in accordance with *synthesis intellectualis*. (3) *Synthesis speciosa* insofar as it proceeds independently of the intellect. If we understand Kant’s explanation in accordance with this distinction, it does not follow that the B-Deduction argues for the necessary conceptualisability of *all* intuitional, sensible content; on the contrary, it follows that the B-Deduction must argue for the conceptual nature of certain privileged ways of *a priori* combination of temporal and spatial characteristics. An analysis of the B-Deduction along these lines is, for example, proposed in Golob (2016).

³² All quotations in this paragraph are from B160–1.

nation’ as well as the two different aspects of conditionality are in play in Kant’s argument. The synthesis of imagination has to synthesise the given manifold in accordance with the form of intuition. If this form of intuition would be a merely indeterminate manifold, which can only receive a structure when the intellect is active in synthesising its manifold, then pointing out that the synthesis of imagination must be *in accordance with the form of intuition* would in fact be nonsensical. The passage thus presupposes the sense in which space and time are non-conceptually determinate representations. But insofar as space and time figure as a *synthetic unity*, their manifold must have been combined with their ‘concept-ready’ unity in view. That is, their manifold must be combined in order to enable the intellect to determine the relation in which this manifold stands to space and time *as objects of thought*. In order for the manifold of space and time to be meaningful for the intellect,³³ the intellect needs to apply its synthesis. This latter act of combination of the spatial and temporal manifold qualifies space and time as *formal intuitions*. The manifold of space and time is meaningful for the intellect only if the intellect’s spontaneity synthesises the manifold in determining the manifold’s relation to “the unity of the theme” (B114), that is, the given object of an intellectual consideration.

The first aspect of determination, that is, space and time as non-conceptually determinate representations, mirrors the first level of conditionality A: Space and time are conditions for every possible manifold given in human sensibility. This conditionality is *a given fact*. The second aspect of determination mirrors the second level of conditionality B: Space and time themselves are only thought as an object (as the “theme” to which their manifold belongs) if a synthetic act was already active in establishing the intellectual sense in which their manifold belongs to space or time. The second level of conditionality *needs to be established* by means of spontaneous acts of synthesis.

This leads us to the question about how to qualify the content of a *formal intuition* (cf. B160n.), that is, should the content in question count as conceptual or as non-conceptual content? The unity of time and space as formal intuitions is in agreement with conditionality B. According to my reading, we therefore need to say that time and space, as formal intuitions, are supplied with *conceptual unity*. However, I think we need to distinguish between an existing conceptual unity of a given sensible manifold and the *content* which this manifold represents. Because the synthesis of imagination needs to take up the given pure manifold of space and time according to their non-conceptual determination, the resulting intuition must respect this determination. The content of a formal intuition is a non-conceptual content, to which a conceptual determination of the pure intellect is applied. But the intellectual determination is not able to fully capture the rich, spatiotemporal, non-conceptual determination represented in the content of the formal intuition. This line of explaining the content of a formal intuition fits well with Onof and Schulting’s claim that space as a whole is necessarily underdetermined by the categories (2015:38–9, 41). If we want to maintain that time and space are represented in a formal intuition as wholes, a certain non-conceptual sense of infinity must be retained in its content, for which intellectual determination is fundamentally insufficient.³⁴ Also, a certain non-conceptual sense of orientation—as I described it in subsection 2.1—must be preserved in formal intuitions, since it is our sensible, and not our conceptual, faculty which enables us to represent oriented features as determinations belonging to an encountered spatial or temporal object in a distinct way. Hence, in a formal intuition’s content there not only remain aspects of an accidental blindness for the intellect, which can potentially be converted into conceptually determined content. The mentioned aspects rather reveal a sense of determination and necessity which

³³ I draw here a contrast between being meaningful for the subject of thinking, the “I”, or the intellect, and being meaningful, or having representational relevance, for the human mind, or *Gemüt*.

³⁴ As Onof and Schulting point out, “conceptual thought”, and all synthetic unity enabled by intellectually guided synthesis, is “confronted with a notion of infinity in intuition” (2015:39), which seems to be underdetermined by categorial synthesis.

is never sufficiently determined by the conceptual functions of the intellect. Hence the content of the formal intuition even is, in some aspects, essentially blind for the intellect. But this does not mean that space and time, as formal intuitions, do not carry with themselves a certain sense of intuitive (or affective) distinctness.

This is, finally, the reason why we can talk of formal intuitions as inclusive representations.³⁵ A formal intuition is a representation that accords with both conditionalities, that is, the condition of givenness on the sensibility side, and the unity established by means of a synthesis of imagination on the intellectual side. The formal intuition retains a sense of intuitional and non-conceptual determination while it is intellectually synthesised in accordance with the categories. The fact of being intellectually determined according to the categories does not imply that the mismatch of pure-intuitional determination and determination by the intellect is abolished.

3.3 An example of a formal intuition of time

According to my understanding of the conception of ‘formal intuition’, Kant provides the reader in §24 with an example of a formal intuition of time:

We cannot [...] represent time without, in drawing a straight line (which is to be the external figurative representation of time), *attending merely to the action of the synthesis of the manifold through which we successively determine the inner sense, and thereby attending to the succession of this determination in inner sense. Motion, as action of the subject (not as determination of an object), consequently the synthesis of the manifold in space, if we abstract from this manifold in space and attend solely to the action by means of which we determine inner sense in accordance with the form of inner sense [bloß auf die Handlung Acht haben, dadurch wir den inneren Sinn seiner Form gemäß bestimmen], first generates even the concept of succession [bringt sogar den Begriff der Succession zuerst hervor].* The understanding therefore does not find some sort of combination of the manifold already in inner sense, but produces it, by affecting inner sense. (B154–5; trans. amended³⁶ and emphasis added)

We represent time as a unity only by means of a spatial analogue. This representation of time requires an action by the transcendental synthesis of imagination, and it is this action of synthesis on which we have to focus further, according to Kant, while abstracting from its specifically spatial nature, that makes the manifold of time, the “form of inner sense”, into a formal intuition. In the following, I want to demonstrate how this passage is in ac-

³⁵ The inclusive nature of a formal intuition has similarity with the transcendental schema, which has the characteristic of a “mediating representation” between sensibility and understanding, in being “pure”, “intellectual”, and “sensible” (A138/B177). The schema is a mediating representation, insofar as it is an act of the transcendental synthesis of imagination, which, like formal intuition, includes a sensible and an intellectual conditionality. It respects the non-conceptual sense of a priori determination while establishing intellectual unity in a sensibly given manifold. There is, however, an important difference between these two elements of the Kantian doctrine. The transcendental schema is a “rule” (ibid.), and therefore of a general nature. The formal intuition, by contrast, represents a singular object, namely space or time; it is a “pure image” (B182/A142) that needs to be distinguished from a schema. See A140/B179ff. for the schema/image difference. The considerations I have just given indicate why I also had to list schemata and images as possible candidates for Kantian non-conceptual representations in Section 1 of this paper.

³⁶ The Cambridge edition of Kant’s works translates the passage “*folglich die Synthesis des Mannigfaltigen im Raume, wenn wir von diesem abstrahieren und bloß auf die Handlung acht haben, dadurch wir den inneren Sinn seiner Form gemäß bestimmen, bringt sogar den Begriff der Sukzession zuerst hervor*” with “consequently the synthesis of the manifold in space, if we abstract from this manifold in space and attend solely to the action in accordance with which we determine the form of inner sense, first produces the concept of succession at all”. This way of translating Kant’s wording is mistaken, since it does not take into account what I called the sensible side of conditionality. The synthesis determines inner sense in accordance with its form, i.e., time. Kant does not say this synthesis determines the form of inner sense.

cordance with the reading of the nature of a formal intuition I have presented so far (1). I shall specifically point out how we have to understand the “accordance” of the mentioned act of determination with the “form of inner sense”. As a further issue (2) I shall investigate the question as what kind of concept we have to understand “the concept of succession”.³⁷

Ad 1. In attending to the understanding’s act of synthesis we attend to an “inner” state. For Kant, insofar as such an inner state can be given at all (at least for the human mind), it has to be given by means of inner sense. Inner sense is a property of human sensibility with the function of intuiting inner states (cf. A22/B37). It is furnished with its own immediate condition for every given manifold that is to be intuited as an inner state: the representation of time as a form of intuition. By means of inner sense we thus intuit inner states—that is, modifications of the human mind—within an all-encompassing *temporal* structure.

For Kant, an act by means of the transcendental synthesis of imagination—as the example from B154–5 indicates—can be performed in such a way that we, as intellects, can consciously attend to our own act of combination through which we intellectually determine the sensible manifold. In a footnote at B156–7 Kant explains that “every act of attention” is an example of the intellect determining inner sense “in accordance with the combination that it thinks”. But what does Kant mean by that? I propose to read this passage in the following way: As in the scenario explained in the B154–5 passage, Kant holds that the act of synthesising a sensible manifold with an intellectual determination in view can itself be subject to an intellectual awareness (through reflective attention). In such a scenario, the acts of combining a manifold are themselves given as an inner state, that is, a modification of the human mind. But this again implies that the act of combination is itself given in the inner sense, within its all-encompassing temporal frame.³⁸ Attending to an intellect’s act, therefore, necessarily includes sensible conditions (for a human mind). This seems to be the reason why, for Kant, time can be an object of intuition when we attend to our act of synthesising, and then further when we attend to the temporal conditions according to which such an act is given to our consciousness.

But time as a formal intuition not only consists in merely attending to one’s own acts of synthesis within a human sensible framework. The “unity of the theme” (B114) of the representation in question in passage B154–5 is not supposed to be the act of synthesis, it is supposed to be time itself. According to Kant, this is not only achieved by attending to the acts of synthesis and then attending to the sensible conditions of the intuitive givenness of such an act in inner sense. In order to correctly represent time, the act of synthesis to which we have to attend and from which we gather its sensible preconditions must be one that combines a spatial manifold that *stands for* the temporal manifold. Time can be represented only via its spatial analogue of the straight line, that is, the one-dimensional space.

In order for the manifold of the line to be meaningful for the intellect, there must be an intellectually guided synthesis of imagination, which combines the manifold given in space and determines the way in which the given manifold is thought as belonging to an object. In the example, representing the manifold *as* belonging to the object <straight line> requires a way in which the intellect can think the manifold as belonging to the object <straight line>, and this is achieved by means of *quantitative synthesis* (the synthesis of homogeneous elements). Since the straight line in this example is the spatial analogue of time, this means that with the same act of synthesis, on a meta-level, the manifold of time is thought as belonging to time as an object, which is intuitionally represented by means of “attending merely to the action of the synthesis” (B154). But just as the intellectual synthe-

³⁷ All quotations in this paragraph are from B154–5.

³⁸ Rational self-knowledge is thus, for Kant, only possible within a sensible, and temporal, representational framework, for which the thesis of transcendental idealism is established in the Transcendental Aesthetic. Consequently, Kant discusses the *phenomenality claim* regarding self-knowledge in §§24–5 of the B-Deduction.

sis is not able to fully conceptualise the non-conceptual determination of the one-dimensional space, the synthesis of time on a meta-level is not able to fully conceptualise the non-conceptual determination of time. That is, although we represent time as the “unity of the theme” of the temporal manifold, a certain sense of non-conceptual (i.e., sensible or affective) determination of time is retained in the content of the formal intuition of time. Within the content of the formal intuition of a straight line, we represent, among others, a necessary sense of single-ness and infinity, which are conceptually underdetermined but still non-conceptual determinations belonging to the one-dimensional space. In the same way, on a meta-level, this sense of non-conceptual determination is present in the formal intuition of time. If we understand the passage B154–5 in this way, then what Kant says about the formal intuition of time is consistent with the reading of formal intuition I have presented in subsection 3.2.

Ad 2. What is the nature of the concept of succession? Kant indicates in the footnote at B160–1 that the *form of intuition* “merely gives the manifold” for an intellectual determination.³⁹ In order to be a non-blind intuition for the intellect, time must be actively synthesised intellectually. Only via intellectual synthesis can I think the given manifold as belonging to an object, which can be thought as having certain characteristics or marks. Thus, the synthesis of imagination guided by the intellect’s functions of unity is presupposed by every conceptual description of time as an object. It therefore grounds all a priori acquisition of concepts that describe temporal structures.⁴⁰ As Kant points out, such a synthesis needs to be effected if we want to acquire, for example, the concept of succession.

The concept of succession is a concept, which characterises a certain temporal relation, a relation that can be thought of as being included in many other sensible representations, also on different levels. The concept of succession can characterise (a) the relation between different periods of time as a formal intuition; (b) the relation between different mental states; and (c) the relation between different properties of existing things (substances). It is therefore able to describe the content of human sensible representations on the three different representational levels Kant calls intuitions, perceptions, and experiences (cf. A161/B200). The concept of succession, however, is not a pure concept of the intellect, it is not an a priori function of synthetic unity among representations, nor is it an empirical concept which is acquired by means of perceptions. It is acquired in pure, formal intuition, and presupposes therefore, on the one hand, the sense in which time is a non-conceptually determinate representation,⁴¹ and on the other hand, an intellect-guided synthesis of the imagination in accordance with an a priori function of the intellect. In the chapter on the Schematism, Kant seems to maintain a trichotomy of conceptual species (A140–2/B180–1): Concepts are either pure concepts of the understanding or sensible concepts, and sensible concepts are either empirical concepts or pure sensible concepts. Confronted with this tri-

³⁹ Caimi (2012) understands the passage where Kant describes the form of intuition as merely giving the manifold in the following way: “[S]hould we deprive our representation of time from all work of spontaneity and understanding, then what is represented as ‘time’ would be pure scattered and vanishing multiplicity” (Caimi 2012:418). By contrast, I think neither that time, taken as the form of intuition, is represented in an indistinct way by the human *mind*, nor that time as a form of intuition has any content at all for the human *intellect*, i.e., not even the content of a vanishing multiplicity.

⁴⁰ I understand the different stages of the representations of time and space in a similar way as Blomme (2013). Time and space as *forms of intuition* (as original intuitions of sensibility) are not yet brought under the synthetic unity of apperception, neither are they produced by the synthetic unity of apperception. Conceptual descriptions of temporal and spatial relations presuppose an intellectually synthesised temporal and spatial manifold and therefore time and space as a *formal intuition*. As *formal intuitions* space and time are thought as the unitary grounds for judgements about them. Contrary to Blomme, I do, however, think that the *form of intuition* (the original intuition of time and space), independently of any synthesis of imagination, is of representational relevance for the human mind.

⁴¹ As I have introduced in Section 2 of this paper, time and space, as forms of intuition, have a determinate structure in a non-conceptual sense.

chotomy, it is clear to me that the concept of succession qualifies as a pure sensible concept.⁴² However, when Kant exemplifies pure sensible concepts he mostly mentions geometrical concepts.

In order to make this clearer, we need to address the question of what the nature of the concept of succession *as* a pure sensible concept is. If we have to think the concept of succession as belonging to the same species of concepts as geometrical ones, then we can think of the concept of succession along the lines presented in subsection 2.1, that is, within the context of the developed sense of non-conceptual determination. For Kant, there are non-conceptually different pure sensible objects, which fall under the same pure sensible concept. Such a difference can appear, for example, insofar as “the limits of the one cannot also be the limits of the other” (GUGR, 2:381). There can be essential orientational differences in our sensible representation of two spherical triangles, whereas they both fall under the concept of a “spherical triangle” (GUGR, 2:381). But it seems as if the schema, which, according to the *First Critique*, grounds (cf. A140/B180) the pure sensible concept of a spherical triangle, can deal with this difference and apply the same concept to differently oriented objects. The schema thus in some way respects the non-conceptual but still pure determination of these objects. Furthermore, by means of the schema we are able to a priori construct the difference in question.⁴³ Schematic procedures of our mind must, therefore, be grounded in certain fundamental non-conceptual capacities. Since the pure sensible concept is grounded in a schema, it can, by means of this schema, respect the non-conceptually determinate structure of space and time.

Insofar as not only the intellectual function of unity is a precondition for generating the concept of succession, but also the originally non-conceptual determination of time, the concept of succession is grounded in and constrained by the representation of time as a form of intuition. Furthermore, conceptual representations that are constrained by a non-conceptually determined, all-encompassing representational frame might not be able to discursively describe a representational content with the same sense of distinctness as it can be given in a corresponding sensible intuition. That is, the corresponding intuition could be furnished with a sense of distinctness and necessity, which is only representable by means of a sensible intuition and not by means of conceptual thought.

I want to conclude with the following line of thought: If we understand pure sensible concepts according to the way I have just outlined, then we have to think of them as apperceptively self-conscious (and to that extent conceptual) cognitions that are essentially anchored in non-conceptual content. And if Kant maintains that we would best describe the content of intuitions, perceptions, and experiences by means of including pure sensible concepts (like ‘succession’), then we have to conclude that there remains a particular sense of non-conceptual determination, and thus non-conceptual objectivity, within the representational content of intuitions, perceptions, and experiences.

Conclusion

In this paper, I proposed a non-conceptualist reading of Kant’s theoretical philosophy, trying to tackle especially the complex relation between the two sources of a priori (objective) cognition in Kant: (1) the original representations of time and space, and (2) the synthesis guided by the pure intellect. For Kant, as I maintain, possible candidates for representa-

⁴² A pure sensible concept is immediately connected with its schema, which is a procedure of the imagination that respects the non-conceptual sense of determination, and necessity, while it provides the pure manifold of space or time with an intellectual unity. As Kant says, “it is [...] schemata that ground our pure sensible concepts” (A140/B180). The concept of succession is therefore similar to the concept of a “number in general”, which is also directly linked to a schema that is realised in pure temporal, non-conceptual content, since “thinking” the number, for Kant, is the same as the “representation of a method for representing a multitude” (A140/B179).

⁴³ Cf. the *dari non intelligi* discussion in the *Metaphysical Foundations of Natural Science* (MAN, 4:484).

tions with non-conceptual content are not only intellectually un-synthesised representations, but also sensible representations which are supplied with a conceptual unity, if these representations contain a sense of non-conceptual determination and necessity that is irreducible to our functions of judgement, and is thus constituted by our a priori non-conceptual capacities alone.

I further developed a reading of the original representation of time (and space) as containing such a sense of non-conceptual determination and necessity, which remains undetermined by the intellectual synthesis. There is a necessary mismatch between the two distinguishable kinds of determination, the non-conceptual determination of time and space as originally sensible representations, on the one hand, and the determination of the temporal and spatial manifold guided by *synthesis intellectualis*, on the other hand. According to this reading, the *formal intuition* of time (and space) retains a sense of intuitional and non-conceptual determination while it is intellectually synthesised in accordance with the categories.

This way of looking at the nature of a formal intuition's content gives us, as I have argued, also insight into the nature of pure sensible concepts. Pure sensible concepts must be grounded, on the one hand, in a fundamental and intellectual determination of the temporal or spatial manifold, and, on the other hand, in a capacity which is able to represent the non-conceptually determined properties of pure intuition. Finally, I maintain that the pure sensible concept is grounded in a schema, and that it can, by means of this schema, respect the non-conceptually determinate structure of space and time.⁴⁴

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