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What is this Thing Called ‘Scientific Knowledge’? – Kant on Imaginary Standpoints And the Regulative Role of Reason

Abstract: In this essay I analyse Kant’s view on the regulative role of reason, and in particular on what he describes as the ‘indispensably necessary’ role of ideas *qua foci imaginarii* in the Appendix. I review two influential readings of what has become known as the ‘transcendental illusion’ and I offer a novel reading that builds on some of the insights of these earlier readings. I argue that ideas of reason act as imaginary standpoints, which are indispensably necessary for scientific knowledge by making inter-conversational agreement possible. Thus, I characterise scientific knowledge as a distinctive kind of perspectival knowledge. This novel reading can illuminate the role of reason in complementing the faculty of understanding and sheds light on the apparent dichotomy between the first and the second part of the Appendix. More to the point, this novel reading takes us right to the heart of what scientific knowledge is, according to Kant, and how it differs from bogus knowledge and opinion.

1 Introduction

What is scientific knowledge? And what is so special about it? We live at a time where these questions, far from being rhetorical, have in fact been dangerously called into question. Experts’ knowledge has been publicly attacked, and the line between scientific knowledge and public opinion repeatedly blurred in prominent quarters. When it comes to policy-making about climate change, or else, these questions matter. They could not matter more. And yet, convincing answers to these pressing questions may prove hard to find. In this essay, I present my own reading of one such famous answer given by Immanuel Kant. Kant’s fully-fledged answer to the question of “what is scientific knowledge?” spans the full Critical project, and as such goes well beyond the scope and limits of the present essay. My more modest goal here is to re-assess a famous qualification that Kant gave to scientific knowledge in a much debated passage of the Appendix to the Transcendental Dialectic in the *Critique of Pure Reason*. In that passage, Kant presents the faculty of reason in its hypothetical use as being directed

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“at the systematic unity of the understanding’s cognitions, which is the **touchstone of truth** for its rules” (*CPR* A 647/B 675). A little earlier in the Appendix, Kant has contended that ideas of reason have

an excellent and indispensably necessary regulative use, namely that of directing the understanding to a certain goal respecting which the lines of direction of all its rules converge at one point, which, although it is only an idea (*focus imaginarius*) – i.e. a point from which the concepts of the understanding do not really proceed, since it lies entirely outside the bounds of possible experience – nonetheless still serves to obtain for these concepts the greatest unity alongside the greatest extension. Now of course, it is from this that there arises the deception, as if these lines of direction were shot out from an object lying outside the field of possible empirical cognition (just as objects are seen behind the surface of a mirror); yet this illusion (which can be prevented from deceiving) is nevertheless indispensably necessary if besides the objects before our eyes we want to see those that lie far in the background, i.e., when in our case, the understanding wants to go beyond every given experience [...] and hence wants to take the measure of its greatest possible and uttermost extension. (*CPR* A 645/B 673)

Kant’s so-called doctrine of the transcendental illusion continues to remain one of the most puzzling, and intriguing aspects of Kant’s theory of knowledge. This essay attends to two main tasks. In the first part (Sections 2–3) two influential interpretations are presented. In the second part (Section 4), a novel reading is advanced. This reading builds on the merits of the preceding interpretations (i.e., perspectival nature and universality of knowledge, respectively). But, overall, it offers a very different analysis of the regulative role of reason’s ideas qua *foci imaginarii*. For it argues that it does not matter whether we are dealing with the ideas of soul and God; or with the idea of “pure water” and “fundamental power”: it is not the content of the idea (what the idea stands for qua archetype of things in themselves, or what I call *I-Archetype*) that provides systematic unity to the cognitions of the understanding. Instead, systematicity is delivered by ideas qua *foci imaginarii* that act as rules (*I-Rule*) for the correct empirical use of the understanding, by conferring universality and unanimity to individual judgments.

Ideas of reason, I maintain, deliver on this task by acting as ‘imaginary standpoints’, which are ‘indispensably necessary’ because they make possible an abstract space of reason where individual judgments (delivered by the faculty of understanding) can be compared and assessed with a twofold aim: that of pursuing the highest moral end; and, that of overcoming doxa, bogus knowledge, and ultimately disagreement on specific subject matters. The specific kind of knowledge delivered by the faculty of reason with its ideas as imaginary standpoints is what I call *perspectival knowledge*; or better, knowledge *towards* a vantage point. And, I take it that perspectival knowledge so understood is the

paradigm of scientific knowledge for Kant, writing in a period where the Enlightenment was redefining the space between doxastic knowledge and scientific knowledge. No wonder, Kant refers to the role of ideas of reason with the strong wording of being “indispensably necessary” to confer unanimity and universality to the individual judgments delivered by the faculty of understanding, and ultimately, as a “touchstone of truth” for the understanding’s cognitions.

2 The indispensably necessary illusion of ideas

That ideas of reason are presented as illusory in the Appendix might not sound *prima facie* puzzling, considering Kant’s previous discussion in the Transcendental Dialectic. For Kant has already clarified the sense in which the term “idea” was used in Plato to refer to something that “not only could never be borrowed from the senses, but that even goes far beyond the concepts of the understanding [...], since nothing encountered in experience could ever be congruent to it” (*CPR* B 370). While clearly not endorsing the Platonic use of the term “idea” as synonymous with “archetypes of things themselves” (*CPR* B 370), Kant enjoins philosophers “to take care and preserve the expression **idea** in its original meaning, so that it will not henceforth fall among the other expressions by which all sorts of representations are denoted in careless disorder, to the detriment of science” (*CPR* B 376). For Kant, an idea (or, equivalently, a “concept of reason”) is “a concept made up of notions, which goes beyond the possibility of experience” (*CPR* B 377), where “notions” are nothing but pure concepts that have their origins “solely in understanding”. Thus, in the Appendix, by calling ideas “illusions”, Kant seems to signal at once his allegiance to the original Platonic expression in denoting something that goes beyond the senses and the understanding. At the same time, he firmly rejects the more recent empiricist (e.g. Humean) usage of the term “idea” to denote faint copies of sense impressions. For, Kant warns, it is “unbearable to hear a representation of the color red called an idea. It is not even to be called a notion (a concept of the understanding)” (*CPR* B 377).¹ But in what specific sense are Kant’s ideas of reason ‘illusory’? Two readings are possible (I call them *I-Archetype* and *I-Rule*):

¹ In this context Kant makes a distinction between **representation** in general (*representatio*) as a genus, whose species include **perception** (or conscious representation). **Cognitions** are defined as objective perceptions, and divided into **intuition** or **concepts**. **Concepts** in turn can be **empirical** or **pure**, and the latter are called **notions**. Hence, an idea of reason is said to be “made up of notions, which goes beyond the possibility of experience” (*CPR* A 320/B 377).

(*I-Archetype*) Ideas of reason are ‘illusory’ because they create a deception: they make us believe that there are objects outside the field of possible empirical cognition “(just as objects are seen behind the surface of a mirror)” (CPR A 645/B 673): i. e., pure earth, pure water, pure air, but also fundamental power, and ultimately soul, world, and God.

Under this reading, ideas of reason would seem to play an *archetypical* role analogous to Plato’s ideas as “archetypes of things themselves” (CPR B 370). Yet by contrast with Platonic ideas, Kant’s ideas of reason are illusory in creating the deception of such archetypes (nowhere to be found either within the bounds of possible experience or beyond, given the limits of our knowledge). But ideas of reason can also be understood as illusory in another sense:²

(*I-Rule*) Ideas of reason are ‘illusory’ because they are not borrowed from the senses and go well beyond the concepts of the understanding. Hence, they are illusory by falling outside the bounds of possible experience. They are not constitutive of the objects of possible experience. Instead, their function is to provide ‘rules’ for the correct use of the faculty of understanding. Hence their having an “excellent and indispensably necessary regulative use” in directing the understanding to a certain goal “respecting which the lines of direction of all its rules converge at one point” (CPR A 644/B 672), a point which – while illusory (*focus imaginarius*) because the concepts of the understanding do not really proceed from it – “nonetheless still serves to obtain for these concepts the greatest unity alongside the greatest extension” (CPR A 644/B 672).

Both readings have a Platonic blueprint. They diverge in emphasizing either what might be called the *archetypical* role; or, the proper *regulative* role (from the Latin *regula*, i. e. rule) of ideas of reason in guiding the understanding’s cognitions. In the literature no clear distinction has been made between these two possible readings, both of which can be found in Kant’s discussion of ideas in the Transcendental Dialectic. Indeed, it is Kant’s own failure to clearly distinguish between these two different readings that has prompted several commentators to concentrate primarily on the first reading (as Section 3 clarifies). Yet failing to distinguish between (*I-Archetype*) and (*I-Rule*) has resulted in an unsolved tension in Kant’s treatment of the transcendental illusion. This tension becomes evident when it comes to explaining why ideas of reason are not just necessary but ‘indispensably necessary’.

² I explore and develop this second sense of ideas being illusory (*I-Rules*) in Massimi (in preparation).

While under a *bona fide* Platonic reading of (*I-Archetype*), the archetypal role of ideas is indispensably necessary for the correct attainment of human knowledge (under what Plato called *episteme*), no similarly indispensably necessary function is available for Kant's ideas of reason (if their illusory nature is cashed out along *I-Archetype*). By distinguishing between appearances and things in themselves, and by relegating the latter outside the boundaries of human knowledge, Kant, under reading (*I-Archetype*), would find himself in the difficult position of having to explain why ideas of reason – qua illusory archetypes of things in themselves – are nonetheless indispensably necessary for knowledge.

An argument can be made (and has indeed been made) for Kant's practical reason (and the related transcendental ideas of soul, world, and God). For freedom has to hold true of human beings if they are to act morally, and moral perfection should describe their aim. What has puzzled commentators of the Appendix is the unusual mixture of the transcendental ideas of soul, world and God, with Kant's other examples of ideas such as "pure earth, pure water, pure air", and "fundamental power". What good are transcendental ideas for theoretical knowledge, and in particular for scientific knowledge? Prima facie, scientific knowledge, e.g. knowledge of the chemical effects and mechanisms at work in a variety of phenomena in nature, does not seem to require ideas of reason – understood as per (*I-Archetype*). In the next Section, I present two influential interpretations of the Appendix and discuss how each has, respectively, answered this puzzle.

3 Two interpretive variations on Kant's transcendental illusion

3.1 First variation: from (*I-Archetype*) to necessity and indispensability

Let us start then with (*I-Archetype*), and ask ourselves how under a first possible reading of the illusory nature of ideas, their being "indispensably necessary" might be justified. Here is a possible way to proceed:

(*I-Archetype*) Ideas of reason are 'illusory' because they create a deception: they make us believe that there are objects outside the field of possible empirical cognition, i.e. "archetypes of things themselves" (*CPR* B 370).

(*Necessity*) Such illusion is necessary in motivating the operations of the understanding, although compared to the understanding it has a merely regulative (and not constitutive) role.

(*Indispensability*) The illusion is indispensably necessary because it allows us to conceive of ‘objects’, which we would not otherwise be able to encounter within the bounds of possible experience.

Under this first interpretive stance, the transcendental illusion would be necessary in motivating the operations of the understanding in seeking after an ideal ground, substrate, or unconditioned.³ This ideal ground, substrate, or unconditioned is illusory, i.e. a *focus imaginarius*, because it does not play any constitutive role for human experience. The categories of the understanding do not derive from it. Yet it is necessary (in its merely regulative role) because it enjoins the understanding to seek after unity among its cognitions: it guides the understanding in the search for systematic unity *as if* there were an unconditioned ideal object from which the unity of all cognitions proceeded. And seeking after systematic unity is not just necessary, but it is in fact indispensable, because it allows finite epistemic agents like ourselves to go beyond the strictures imposed by sensibility and understanding.

Scholars adopting this interpretive stance have emphasized the direct link between what I have called (*I-Archetype*) – namely, the archetypal reading of ideas as illusory objects – with the regulative role of reason in seeking after systematic unity as necessary for a correct use of the understanding.⁴ Kant’s quest for systematicity has often been read as the quest for ideal unconditioned ‘objects’ that would inevitably take the understanding beyond its proper domain and remit. While not playing any role for the constitutive conditions of possibilities, scholars have argued for the necessary regulative use of transcendental ideas in unifying and conferring systematic unity to what would otherwise be

³ See for example Grier (1997, 13–4): “Reason then, because it is concerned precisely to unify our knowledge by conceiving it in relation to an ideal ground or substrate, is inherently illusory”.

⁴ See Grier (1997) and (2001, ch. 8) for a classic example of this interpretive stance. According to Grier (1997), Kant’s transcendental illusion is the product of conflating a subjective or logical maxim P_1 (“Find for the conditioned knowledge given through the understanding the unconditioned whereby its unity is brought” (*CPR* A 308/B 364)) with another synthetic transcendental principle P_2 (“If the conditioned is given, the whole series of conditions, a series which is itself unconditioned, is also given” (*CPR* A 308/B 365)). Grier argues that “this conflation must be understood as a failure to see that the necessary principle P_2 has a merely regulative, not a constitutive, use (as P_1) when viewed in connection with the theoretical knowledge given through the understanding” (1997, 13).

only a contingent aggregate of cognitions.⁵ Leaving here aside specific discussions on the regulative role of reason, or the pursuit of systematicity as a transcendental principle, it is instead the inference from (*I-Archetype*) to the conclusion that transcendental ideas, qua *foci imaginarii*, are “indispensably necessary” that is the topic of this essay, a topic that deserves more scrutiny than it has attracted so far in the otherwise voluminous literature.

Thought-provoking as is, two problems stand nonetheless on the way of this first interpretive stance. The first problem concerns (*Necessity*); the second (*Indispensability*). What kind of necessity might possibly attach to illusory transcendental ideas? The above interpretive stance enjoins us to think that the illusion of thinking an ideal ground, substrate, or unconditioned behind the appearances is necessary in motivating the operations of the understanding, in a merely regulative (non-constitutive) role. The necessity that attaches to the regulative use of transcendental ideas, however, is not the kind of modal necessity originating from the understanding; and its precise non-modal status remains to be clarified.

Modal necessity features prominently in the Postulates of Empirical Thinking in General, where it captures the way in which the Postulates operate with respect to the Analogies to make experience of nature possible for us (see *CPR* A 234/B 287), and ultimately, it plays also a key role in Kant’s account of the lawfulness of nature.⁶ But modal necessity finds no home in the Transcendental Dialectic, and certainly not in Kant’s analysis of the transcendental illusion. Thus, we are left with the open and pressing task of explaining how – under this first interpretive reading – the transcendental illusion would in fact be *necessary* in motivating the operations of the understanding; i.e. in what sense is seeking after an ideal ground, substrate, or unconditioned (*non-modally*) *necessary* for a correct employment of the understanding?

Leaving this first problem concerning (*Necessity*) aside, a more pressing problem concerning (*Indispensability*) arises. Under this first reading, the illusion created by the *foci imaginarii* is said to be “indispensably necessary”, because it allows us to conceive of ‘objects’, which we would not otherwise be able to encounter within the bounds of possible experience. But why is our conceiving of such ideal unconditioned objects indispensable?

⁵ For example, although not in the context of a discussion of the transcendental illusion, Friedman (1991, 1992a, 1992b) has argued for the necessary role of reason in its regulative function to confer systematicity onto what would otherwise be only an aggregate of disparate empirical laws. Guyer (1990, 2003, 2005, and forthcoming) has analysed the regulative role of reason in seeking after systematic unity (as if nature were itself systematic) so as to secure the nomological necessity of empirical laws.

⁶ I have discussed this aspect in Massimi (2017).

As a reply, one might stress that the optical illusion produced by transcendental ideas allows finite discursive agents like us to go beyond the bounds imposed by sensibility and understanding and to reach out to the unconditioned.⁷ On the face of it, however, the ability of reason to reach out to the unconditioned, and make us conceive (*begreifen*) of ideal illusory objects might at best be useful, instrumental, desirable; but not indispensable. For it to be indispensable means that *no* coherent use of the faculty of understanding *is possible without it*.

An intriguing rejoinder might stress the analogy here between theoretical reason and practical reason. In practical philosophy, a subjective maxim can become the moral law (for finite agents like us) only by stretching out beyond its boundaries. Analogously, in theoretical philosophy, the transcendental illusion proves indispensable in transforming a merely subjective principle (which may enjoin us to find the unconditioned for the conditioned knowledge given by sensibility and understanding), into an objective transcendental principle.⁸ This capacity of the transcendental illusion to reify / objectify a merely regulative, subjective quest into a transcendental principle (systematicity) – *as if* nature were indeed a system; *as if* there were ideal unconditioned objects (pure earth, pure water, pure air) – would guide our correct employment of the understanding as much as the moral law would guide our practical actions. The inference then from (I-Archetype) to the indispensably necessary illusion would take the following form:

(*I-Archetype*) Ideas of reason are ‘illusory’ because they create the deception of “archetypes of things themselves” (*CPR* B 370), i. e. of ideal unconditioned objects ‘lying behind the mirror’.

⁷ Grier (1997, 15) has argued that the optical illusion is indispensable because “it enables us to view ‘objects’ which otherwise would fall beyond our visual field (“behind us”). As such the ‘illusion’ is instrumental in presenting objects which otherwise would not be available to us. [...It allows] us to conceive of ‘objects’ which we are not in a position to encounter when we are constrained by the conditions of the understanding and sensibility”.

⁸ Grier (1997, 15) resorts to this analogy between practical and theoretical reason, in explaining how a subjective rational maxim (like P_1) is “only made accessible to us as objective principles by means of the illusion (they can become principles for us because of this)”. Hence, the “objectified version of the principle of systematic unity (P_2) plays a role in Kant’s first Critique akin to that which the Moral Law plays in the practical philosophy” (*ibid.*, 16).

(*Necessity*) Such illusion is not necessary in any genuine (modal) sense of conditioning and determining the operations of the understanding (e.g. in the empirical connection of perceptions via concepts). Rather, it is at best instrumental as a rational assumption in allowing finite discursive agents like us to go beyond the boundaries imposed by sensibility and understanding.

(*Indispensability*) Going beyond the boundaries imposed by sensibility and understanding, and reaching out to ideal (albeit) illusory objects is important for finite discursive agents like us because it transforms subjective rational maxims into objective principles for us.

The net effect of this threefold move, however, is to push back one step the original question about why the transcendental illusion is “indispensably necessary”. For it is not necessary in the sense of contributing in any way to the activity of the understanding in delivering objects of possible experience (i.e. it does not play any constitutive role). At best, it is desirable and sought-after (but not really indispensable) in giving legitimacy to otherwise subjective rational maxims, which we might find useful in empirical investigation (e.g. think of nature as if it were systematic; think of chemical reaction as if there were pure earth; and so forth).

Despite these problems, a significant merit of this interpretation is the emphasis placed on us as finite discursive agents. The mirror metaphor works only insofar as there are epistemically limited agents looking at the vanishing point.⁹ I shall come back to this important perspectival aspect of the transcendental illusion in Section 4, where I lay out a novel reading of the transcendental illusion that probes deeper into the perspectival nature of the metaphor.

⁹ Grier draws attention to this important feature of the metaphor of the *focus imaginarius*, namely “the viewpoint of the perceiver or knower who ‘sees’ the image. Indeed, the illusion is only successful to one who has the relevant perspective in relation to the ‘mirror’, and it is only useful for one who is limited in her perspective in the first place. I take the ‘objects behind our backs’ to correspond to objects qua considered by pure reason (ideas). And I take the need to consider objects from this perspective to issue from our own epistemological situation as finite discursive knowers.” (Grier 2001, 287).

3.2 Second variation: from (I-Archetype) to necessity and indispensability (via problem of induction)

Here is another possible way of reading the indispensably necessary role of ideas under (*I-Archetype*):

(*I-Archetype*): Ideas of reason are ‘illusory’ because they create a deception: they make us believe that there are objects outside the field of possible empirical cognition, i.e. “archetypes of things themselves” (*CPR* B 370).

(*Necessity*): Such illusion is necessary in motivating the operations of the understanding in a merely regulative (and not constitutive) sense. In particular, the illusion is necessary because it allows the understanding to go beyond its limited domain of experience and make valid universal generalisations about the whole.

(*Indispensability*): The illusion is then indispensably necessary because being able to go from part to the whole, and make universally valid generalisations about the whole allows the understanding to ultimately fulfill its own task.

While this second interpretive reading shares with the first one a similar commitment to the transcendental illusion as seeking after an ideal ground, substrate or unconditioned, such commitment is put to a different epistemic use: that of securing universally valid inductive inferences from part to whole (or from observed to unobserved). The understanding would lack resources for securing inductive inferences. For even the application of the Analogies of Experience does not go beyond the specific application of, say, the cause–effect relation to a specific sequence of two appearances (e.g. the presence of *this* loadstone here, and the movement of iron filings *there*). Hence, our ability to draw inductive inferences – inferences that go beyond any specific sequence of appearances, and whose universal validity extends to any similar relations of appearances of the same type (e.g. “All loadstones attract iron filings”) – seems to require the transcendental illusion of ideas of reason.

Connecting the transcendental illusion to the Humean problem of induction helps elucidate some of the difficulties encountered by the first interpretive reading. For example, it can explain the puzzlingly non-modal nature of the necessity involved in the transcendental illusion. Transcendental ideas qua *foci imaginarii* are necessary because reason – in its hypothetical use – provides us with the universals (e.g., “pure water”, “fundamental power”) under which particulars

can be subsumed.¹⁰ These universals are required because without them the understanding could not even deliver true universal generalisations, key to science.

The other bonus of this second interpretation is that it helps gaining a better grasp of indispensability. The faculty of understanding, with its *a priori* categories and principles, can at best establish that for each event there is *some* cause; but not that causes of type X are followed by effects of type Y.¹¹ For an inductive generalization of this type, which is usually at work in laws of nature, reason in its hypothetical / regulative use is required to complement the understanding.

While this second interpretation rightly stresses the importance of guaranteeing universal validity to our judgments – something that I take to be correct, and to which I return in Section 4 – , two problems stand nonetheless against the link with the problem of induction. First, while this second interpretation sheds light on the empirical use of the understanding and the hypothetical use of reason when it comes to ideas such as “pure earth, pure water, pure air”, things are undoubtedly more complicated when it comes to the three official transcendental ideas (God, soul, and world) in the second part of the Appendix. What could God, soul, and world possibly have to do with the problem of induction? What role could the idea of soul possibly ever have for psychology? Or, the idea of the world for cosmology?¹²

In the next Section, an alternative novel reading of the transcendental illusion is proposed. Core to it is the switch from ideas as “archetypes of things in themselves” to ideas as “rules” or “maxims” for a correct empirical use of the understanding. The bonus of this novel reading, as we shall see, is a better understanding of the notoriously thorny issue of the fit between the first and the

10 Universals should be such that they are neither given *a priori* (and hence empirically unrevisable) nor empirically given (otherwise they would not be able to fulfill their taxonomic task of providing an ideal ground for subsuming particulars). Zuckert (2017, 89–90) spells this point out in a compelling way when she takes the three official transcendental ideas (soul, world, God) as “placeholders” (although not for the specific purpose of securing induction, but instead for empirical knowledge).

11 See on this point Allison (2004, 427–8).

12 Allison acknowledges these interpretive wrinkles with the second part of the Appendix: “What he [Kant] is now claiming is that by providing the requisite *focus imaginarius*, the transcendental ideas serve as application conditions for these principles of systematic unity. [...] The task of the deduction is to show that each of the transcendental ideas plays such a role, which is to say that it is indispensable as a *focus imaginarius*. Clearly the prospects for such a deduction depend largely upon two factors: (1) establishing the necessity of the *focus imaginarius*; (2) showing that the transcendental ideas (and only these ideas) are capable of functioning as such. Both of these, however, are far from obvious” (Allison 2004, 439).

second part of the Appendix, as well as a more natural solution to the puzzle about the indispensably necessary role of illusory ideas.

4 A novel reading of the transcendental illusion. From ideas as imaginary standpoints to the perspectival space of reason

My discussion so far has highlighted prospects and problems of two prominent readings of the transcendental illusion. The aim of this Section is to defend an alternative interpretation that does not take as its starting point (*I-Archetype*), i. e., ideas as “archetypes of things in themselves”, but instead what I have called (*I-Rule*), i. e., ideas as “rules for the correct use of the faculty of understanding”. The previous Section has clarified the difficulty of reconciling (*I-Archetype*) with the “indispensably necessary” role of ideas as *foci imaginarii*. There is one major difficulty that has only briefly been mentioned at the end of the last Section. The difficulty concerns the surprising asymmetry between the first and the second part of the Appendix to the Transcendental Dialectic. What has baffled commentators of the Appendix is Kant’s unusual choice of combining a discussion of systematic unity – with the ideas of “pure earth, pure water, pure air” – in the first part, with a second part dedicated primarily to the three official transcendental ideas of God, soul and world.¹³

Under both interpretive readings discussed in Section 3, the link between the two parts of the Appendix is forged by what I have called (*I-Archetypes*): pure earth, pure water, pure air, no less than God, soul, and world provide ideal grounds for the systematic unity of nature. We ought to think of natural phenomena as if there were pure water; as much as we ought to think the world itself as if there were God. In both cases, unity could be bestowed upon an array of appearances (as if there were genuine natural kinds; and as if there were an intelligible kingdom of nature with God as its ultimate ground).

Yet, a closer reading of the second part of the Appendix reveals problems with (*I-Archetypes*). Leaving aside the idea of the world (where Antinomies arise), when it comes to God and soul, Kant clearly says that “there is not the least thing to hinder us from **assuming** these ideas as objective and hypostatic” (*CPR* A 673/B 701). However, “their reality should hold only as that of a schema of the regulative principle for the systematic unity of all cognitions of nature;

¹³ See Zoicher (1956); Brandt (1989); and McLaughlin (2014); see also Geiger (2003).

hence they should be grounded only as analogues of real things, but not as things in themselves" (CPR A 674/B 702). To better grasp the spirit of this move, Kant introduces a distinction between "assuming something relatively (*suppositio relativa*)" and "assuming it absolutely (*suppositio absoluta*)" (CPR A 676/B 704). Kant clarifies how this distinction is vital for grasping the role of regulative principles, whereby "I put the transcendental presupposition to no other use but a relative one – namely that it should give the substratum for the greatest possible unity in experience" (CPR A 678/B 706), like a "a schema of a regulative principle for the greatest possible empirical use of my reason" (CPR A 679/B 707). Indeed, Kant warns against the mistake of taking the significance of ideas "to be the assertion, or even only the presupposition, of an actual thing to which one would think of ascribing the ground for the systematic constitution of the world" (CPR A 681/B 709).

Kant enjoins us instead to posit "an idea only as a unique *standpoint from which alone* one can extend the unity that is so essential to reason and so salutary to the understanding; in a word, this transcendental thing is merely the schema of that regulative principle through which reason, as far as it can extends systematic unity over all experience" (CPR A 682/B 710, emphases added). Mark these words – ideas should not mistakenly be hypostatized into causes, objects, things acting as ideal grounds for the unity that reason seeks out. Kant uses instead the language of "standpoint", "*focus imaginarius*" and "rules" to explicate the regulative role of ideas of reason. Why this language? I suggest reading these passages as textual evidence for what I have called (*I-Rule*) over (*I-Archetype*), and the time has now come to fully articulate what is at stake in this distinction.

Ideas of reason – I contend – offer the understanding *rules* for seeking out systematic unity among its cognitions. They do so, not by positing ideal grounds or substrata, which might allow us to think of the world as if it was a whole: i. e., think of nature as if God were its ideal ground; or, in more mundane terms, think of chemical reactions as if there were natural kinds "pure earth, pure water, pure air". Instead, ideas accomplish their indispensably necessary regulative function by laying down the *rules* that the understanding ought to follow, if it wants to go beyond given experience and take the measure of "its greatest possible and uttermost extension" (CPR A 645/B 673).

Ideas as "rules" bestow systematic unity by offering imaginary standpoints (a *focus imaginarius*) from which "the concepts of the understanding do not really proceed" but that "nonetheless still serves to obtain for these concepts the greatest unity alongside the greatest extension" (CPR A 644/B 672). Think of ideas of reason as imaginary standpoints defining the abstract space of reason within which the understanding's cognitions are ultimately located. This abstract space of reason is effectively what might be called a 'perspectival space of rea-

son' generated by ideas qua *foci imaginarii*.¹⁴ The perspectival space of reason is devoid of the specific representational content of this or that individual's judgment. It is after all only an abstract space. The function of the *focus imaginarius* is to create such an abstract space, where individual judgments delivered by the understanding can attain the unanimity and universality that they would otherwise lack. More to the point, this new perspectival space is the only method for preventing what in the pre-Critical *Dreams* Kant calls the "optical deception" of taking one's own doxastic judgments as *bona fide* knowledge claims.

A better grasp of what is at stake in the metaphor of the *focus imaginarius* can be obtained by analogy with perspectival drawing in art. Why was the invention of perspectival drawing so important in the Renaissance? Perspectival drawing uses a vanishing point as the focal point towards which all lines converge. The net outcome, in the words of the neo-Kantian art historian Panofsky, is a transformation of the wall or the panel where individual figures would previously be piled up "into a space, ...bounded on all sides...The picture has become a mere 'slice' of reality, to the extent and in the sense that *imagined* space now reaches out in all directions beyond *represented* space".¹⁵ The stark contrast between the conglomerate of figures typical of Medieval art (think of the Byzantine mosaics where figures crowd around the borders) and the orderly and spacious display of Renaissance art (in, say, Piero della Francesca's *Flagellation of Christ*; or, in van Eyck's *The Arnolfini Portrait*) is testimony to the great achievement of using a vanishing point in perspectival drawing.

I suggest reading Kant's metaphor of the *focus imaginarius* in analogy with perspectival drawing in art. Reason has an "indispensably necessary regulative use" because it provides a *focus imaginarius*, which makes possible a perspectival systematic space of reason for the correct use of the understanding. The unity of reason becomes then an "indispensably necessary illusion" because it makes

14 In the pre-Critical text *Dreams of a Spirit-Seer* (AA 2:345) Kant introduces for the first time the term 'focus imaginarius' in the context of a distinction between representations of objects present to the outer sense vs figments of imagination (where the *focus imaginarius* lie within the subject herself, so to speak, in cases of derangements typical of spirit-seers). Most interestingly for the discussion here, it is in this context that Kant – twenty or so years before the Appendix of the first Critique – uses the metaphor of the *focus imaginarius* to allow us to compare individual judgments: "the only means of placing the concepts in the true positions which they occupy relatively to the cognitive faculty of human nature" (AA 2:349). Comparing and integrating individual judgments implies projecting them onto what I call a perspectival space of reason, i.e. towards an imaginary standpoint from which their universal validity can be assessed, while bogus or doxastic judgments can be discarded. I discuss this point in *Dreams* in Massimi (in preparation).

15 Panofsky (1991, 60 – 1).

possible to transform a contingent aggregate of individual cognitions produced by the faculty of understanding (i.e. my representation of a table in front of me; my representation of a book; my representation of a plant) into a whole unitary representation of a desk with a book on it and a plant to the left of the book. Just like perspectival drawing in art transformed Medieval paintings into a 'window'; similarly, reason in its hypothetical use transforms the aggregate of objects of experience delivered by the faculty of understanding into a whole unity. Such transformation is made possible by ideas of reason as imaginary standpoints acting as rules in directing the understanding's cognitions towards an imaginary space that can confer systematic unity to them. If the analysis so far is correct, what is then really at stake in the metaphor of the *focus imaginarius* and the transcendental illusion are ideas as 'rules' (*I-Rule*) for guiding reason in its hypothetical use towards the systematic unity of the understanding's cognitions. In this sense, the reading here proposed agrees with and builds on Grier's valuable point about the perspectival nature of the mirror metaphor.¹⁶

Reason offers ideas as an imaginary standpoint (*focus imaginarius*), which acts – to borrow David Lewis's expression – as a "shared conversational scoreboard"¹⁷ with respect to which individual judgments and knowledge claims can be assessed. I have elsewhere called this specific kind of knowledge delivered by the faculty of reason *perspectival knowledge*.¹⁸ Having an imaginary standpoint that acts as a "shared conversational scoreboard" is important to reach what – echoing and paraphrasing somehow MacFarlane's terminology – might be called *intra-conversational agreement* (i.e. agreement on a given subject matter where as more evidence become available two or more interlocutors might revise their judgments) and *inter-conversational agreement* (i.e. agreement across dif-

16 Recall Section 3.1, footnote 9.

17 The metaphor of the "scoreboard" is taken from David Lewis (1979), further developed by DeRose's contextualist account of disagreement (2004) where in MacFarlane's (2007, 19) words, "the scoreboard might include a shared epistemic standard that changes as the conversation evolves, getting more stringent when the stakes are high, and less stringent when they are low".

18 In Massimi (in preparation) I argue that there are two notions of perspectival knowledge at play in Kant. The first (*perspectival knowledge*) is knowledge from a vantage point qua knowledge delivered by the faculty of understanding with its a priori categories and principles. The second (*perspectival knowledge*) is knowledge towards a vantage point, namely towards the illusory ideas of reason qua *foci imaginarii*. This distinction is important to rectify common readings of Kant as endorsing a kind of perspectival/situated knowledge that would seem to make his view slide into transcendental solipsism (for one such prominent reading see Moore 2006).

ferent epistemic communities that might disagree on the very same evidence available to both).¹⁹

Note, however, that acting as a “shared conversational scoreboard” to allow individual judgments to reach unanimity and universality does not necessarily imply that ideas of reason have to be construed (primarily or exclusively) as some kind of *epistemic* standards. Indeed, the whole purpose of the Transcendental Dialectic is precisely to deny for the three transcendental ideas of God, soul, and world any epistemic status – at best these ideas have a speculative interest. Instead, the three ‘official’ ideas provide shared *practical* standards: they tell us “**what is to be done** if the will is free, if there is a God, and if there is a future world. Now since these concern our conduct in relation to the highest end, the ultimate aim of nature which provides for us wisely in the disposition of reason is properly directed only to what is moral” (*CPR* A 801/B 829) – we are told in the Canon of Pure Reason, First Section entitled “On the ultimate end of the pure use of our reason”. Hence, this novel interpretation of the transcendental illusion has the potential of explaining away the apparent discrepancy between the first and second part of the Appendix by taking ideas of reasons as imaginary standpoints – both epistemic and practical – for conferring unanimity and universality (to our scientific knowledge claims no less than to our moral actions, respectively).

But there is more. Going back to the problem of defining ‘what is scientific knowledge?’, with which I opened this essay, this novel interpretation of Kant’s transcendental illusion takes us right to the heart of Kant’s answer to this question in the Critical project. For the importance of unanimity and universality (made possible by the perspectival space of reason under my interpretive reading) is not confined to scientific knowledge claims or moral actions. Instead, unanimity and universality are for Kant the hallmarks of *bona fide* knowledge against doxastic or bogus knowledge, more in general. That is why the indispens-

¹⁹ MacFarlane (2007) draws the difference between these two kinds of disagreement in relation to contextualist and relativist strategies for handling disagreement. He argues that while the contextualist strategy exemplified by DeRose resorts to Lewis’s idea of a shared conversational scoreboard to explain intra-conversational disagreement, such strategy cannot also be deployed in the case of inter-conversational disagreement. For in the latter case, it is precisely the lack of a shared scoreboard that is behind disagreement on matters of taste or else (MacFarlane discusses primarily examples of disagreement concerning what is delicious, or what is funny, rather than scientific disagreement). In those situations, MacFarlane argues, the relativist has the upper hand in dealing with disagreement. I discuss MacFarlane’s view in relation to Kant’s notion of perspectival knowledge in Massimi (in preparation). Suffice to say here that I believe that in matters of scientific inter-conversational disagreement, the Lewisian “shared scoreboard” strategy can still be successfully deployed, if a Kantian twist is given to the notion of “shared scoreboard” along the perspectivalist lines proposed in the rest of this paper.

ably necessary role of ideas of reason cannot be restricted to inductive inferences. It extends to the very possibility of knowledge in a more general sense, i.e. the possibility of a correct use of the faculty of understanding (recall Kant's wording in the Appendix where the hypothetical use of reason is defined as the "**touchstone of truth**" for the systematic unity of the understanding's cognitions, *CPR* A 647/B 675).

It is indicative for example that the metaphor of the *focus imaginarius* originally appears in the pre-Critical *Dreams* in the context of Kant fighting against doxastic judgments about popular reports concerning the paranormal powers of Swedenborg. Further corroboration for this novel interpretation can be found in the Canon of Pure Reason in the first Critique, where Kant goes back once again to the regulative use of reason and its practical interest in the pursuit of the highest end. In the Third Section of the Canon entitled "On having an opinion, knowing, and believing" Kant draws a distinction between "conviction" and "persuasion". This distinction bears on the broader issue of judging something to be true, and – crucially for my interpretation so far – points, once again, to the ability of communicating to peers and reach inter-conversational agreement vital for securing the universality and unanimity of our knowledge claims.

Indeed in the Canon, Kant returns to the problem of defining knowledge, and distinguishing knowledge from opinion, a problem that besets him throughout the first Critique.²⁰ How to strike a middle ground in between the subjectivity at stake in the very act of judging (what he calls "the subjective causes in the mind of him who judges") and the need for "objective grounds" upon which the truth of any judgment should rely? If taking something to be true "has its ground only in the particular constitution of the subject, then it is called **persuasion**. Persuasion is a mere semblance [*Schein*], since the ground of the judgment, which lies solely in the subject, is held to be objective. Hence such a judgment also has only private validity, and this taking something to be true cannot be communicated" (*CPR* A 820/B 848).

On the other hand, if the judgment "is valid for everyone merely as long as he has reason, then its ground is objectively sufficient, and in that case taking something to be true is called **conviction**" (*CPR* A 820/B 848). Kant seems to be saying that true judgments are not simply judgments delivered by the understanding. For the understanding can only guarantee the private validity of the judgments subjectively produced (hence a lingering threat of transcendental solipsism that some scholars have seen at work in Kant's Critical project).²¹ A condition for true judg-

²⁰ For an excellent discussion of this overall topic see Chignell (2007).

²¹ See footnote 18.

ments (or *bona fide* knowledge) is the ability to communicate them so that inter-conversational agreement can be reached and solipsism evaded:

Truth, however, rests upon agreement with the object, with regard to which, consequently, the judgments of every understanding must agree (*consentientia uni tertio, consentiunt inter se*). The touchstone of whether taking something to be true is conviction or mere persuasion is therefore, externally, the possibility of communicating it and finding it to be valid for the reason of every human being to take it to be true; for in that case there is at least a presumption that the ground of the agreement of all judgments, regardless of the difference among the subjects, rest on the common ground, namely the object, with which they therefore all agree and through which the truth of the judgment is proved. (CPR A 821/B 849)

In this extraordinary passage of the Canon, Kant unequivocally clarifies the key role of reason (in its hypothetical use) in acting as a “**touchstone of truth**” for the cognitions of the understanding, as he presents it in the Appendix. For judging that things are a certain way requires more than the understanding producing cognitions that agree with the object. It requires instead also “the possibility of communicating it and finding it to be valid for the reason of every human being to take it to be true”. Without reason and ideas as rules for inter-conversational agreement, there cannot be any guarantee that my judging that things are a certain way matches with other people’s judgments that things are indeed that way.

Although truth is defined as “agreement with the object”, Kant cannot avail himself of any traditional correspondence theory of truth. For after all, the ‘object’ in question can only be an object of experience, delivered by the individual’s faculty of understanding. And the risk might arise that different individuals, with their respective faculties of understanding (although sharing the same *a priori* categories and schemata) may nonetheless arrive at judgments whose agreement with the object might ever so slightly diverge (e.g. Is protium oxide water? Is deuterium oxide water?; Is lanthanides a rare earth? What about yttrium?). Hence, the need to go beyond the subjectivity seemingly at stake in the ability to judge typical of the faculty of understanding, and to secure inter-subjective agreement with the object. This is precisely what the faculty of reason, with its ideas qua imaginary standpoints, offer: a “shared inter-conversational scoreboard”, where it is possible to reach agreement and establish the universal, objective validity of true judgments.

True judgments are not effected by the faculty of understanding alone. They are ultimately effected by the faculty of reason in its indispensably necessary regulative role. For it falls within reason’s remit to test how each individual judgment would fare on the inter-conversational scoreboard: to agree with a third party is to agree with each other (*consentientia uni tertio, consentiunt inter se*). *I-Rule* are the third party, the imaginary standpoints, upon which universal

inter-subjective agreement can be reached – the kind of agreement that is the “touchstone of truth” for the cognitions of the understanding. Unsurprisingly, Kant continues the passage of the Canon as follows

the experiment that one makes on the understanding of others, to see if the grounds that are valid for us have the same effect on the reason of others, is a means, though only a subjective one, not for producing conviction, to be sure, but yet for revealing the merely private validity of the judgment, i.e., something in it that is mere persuasion.

If, moreover, one can unfold the subjective **causes** of the judgment, which we take to be objective **grounds** for it, and thus explain taking something to be true deceptively as an occurrence in our mind, without having any need for the constitution of the object, then we expose the illusion and are no longer taken in by it, although we are always tempted to a certain degree if the subjective cause of the illusion depends upon our nature.

I cannot **assert** anything, i.e. pronounce it to be a judgment necessarily valid for everyone, except that which produces conviction. I can preserve persuasion for myself if I please to do so, but cannot and should not want to make it valid beyond myself. (CPR A 821f./B 849f.)

The transcendental illusion plays a vital part in delivering not just ideas for the highest moral ends or for achieving scientific knowledge, but for the very possibility of knowledge (against opinion, or what Kant calls “persuasion”). Although the risk of deception is always looming, our ability to make assertions, i.e. judgments “necessarily valid for everyone”, is ultimately due to reason and its ideas acting as a *focus imaginarius* with respect to which individual judgments must be assessed and their universal validity warranted. This is ultimately how Kant’s *perspectival knowledge*₂ is and, in my view, remains one of the greatest legacies of the philosophy of the Enlightenment: it gives the best answer to the question ‘what is scientific knowledge?’, by providing an antidote (i.e. reason in its regulative role) against the ongoing dangers of bogus knowledge and popular opinions.²²

22 “**Having an opinion** is taking something to be true with the consciousness that it is subjectively **as well as** objectively insufficient. If taking something to be true is only subjectively sufficient and is at the same time held to be objectively insufficient, then it is called **believing**. Finally, when taking something to be true is both subjectively and objectively sufficient it is called **knowing**. Subjective sufficiency is called **conviction** (for myself), objective sufficiency, **certainly** (for everyone). [...] In judging from pure reason, **to have an opinion** is not allowed at all.” (CPR A 822f./B 850f.).

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