A System of "Higher Idealism", of "Preformation", or of the "Epigenesis of Pure Reason"? Kant's response to the first Review of the *KrV* and to Schultz's Review of Ulrich's *Institutiones Logicae*

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Abstract: This paper reconstructs a short story in the troubled reception process of transcendental idealism. As is well known, some interpreted it as a radical form of idealism, not very different from that proposed by Berkeley, while others found a substantial similarity with the Leibnizian doctrine of pre-established harmony. Through the reconstruction of a polyphonic debate, it will be argued that Kant considered these problems resolved with the second edition of the Deduction of the Categories, where he describes transcendental philosophy as an epigenetic system. It will thus be shown the relevance of the review as a tool for philosophical discussion in the eighteenth century, highlighting the influence that two reviews had in the history of the Deduction.

Keywords: Scepticism, Idealism, Preformation, Deduction, Epigenesis.

1. Introduction[1]

Kant has often been considered an author detached from the context in which he studied and worked, closed off from dialogue with others due to the superiority and extreme innovativeness of his work, which supposedly marked a decisive turning point in the history of philosophy. However, there is no shortage of more recent studies that have focused on the continuity between transcendental philosophy and its Latin-German sources, which are extremely useful for understanding the Kantian conception of metaphysics.[2] Studies on anthropology and

[1] I cite the "philosophical reviews" in the original edition: the English translation is mine. I cite Kant's and his contemporaries' works from standard English translations, when available: only the two editions of the *Critique of Pure Reason,* for which I follow Guyer' and Wood's translation, are cited following the original page numbering (A for the first, B for the second). For Kant's letters and reflection, I cite from the *Akademie Ausgabe,* and I am responsible for the English translations.

[2] Among many others, I would cite the studies of Hinske 1970; Tonelli 1987; Rumore 2007; Tommasi 2009; Lorini 2017.

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geography have finally shown how, in Kant, academic research was intertwined with pedagogical activity, and how disciplines long considered minor or merely popular had a fundamental function within the critical investigation itself, whose cosmic concept of philosophy [*Weltbegriff*] could not fail to involve the human being as a citizen of the world [*Weltbürger*].[3] This paper will therefore attempt to restore the image of a Kant attentive to the reception and understanding of his work, open to dialogue and even, if necessary, to the revision of some aspects of his philosophy. The guiding thread I am going to follow will be the troubled understanding of transcendental idealism, which was attacked on several fronts by Kant's contemporaries. As is well known, some interpreted it as a radical form of idealism, not very different from that proposed by Berkeley,[4] while others found a substantial similarity with the Leibnizian doctrine of pre-established harmony.[5] Through the reconstruction of a polyphonic debate, it will be argued that Kant considered these problems resolved with the second edition of the Deduction of the Categories, where, through a very well-known biological metaphor,[6] he describes transcendental philosophy as an epigenetic system. It will thus be shown the relevance of the review as a tool for philosophical discussion in the eighteenth century, highlighting the influence that two reviews had in this process: the first one is the famous first review of the *Critique of Pure Reason*, which appeared anonymously in the *Göttingischen Anzeige der gelehrten Sachen* but was the result of the joint work of Feder and Garve (the question of authorship, as I shall show, is debated), and the second one is another, less known review for the *Allgemeine Literatur-Zeitung*, also published anonymously but written by a pupil and friend of Kant, Schultz, and addressed to the *Institutiones logicae* of Ulrich, a professor at the University of Jena who was attempting to bring transcendental philosophy back under the traditional schemes of Leibnizian metaphysics.

1.1 The First Review of the *Critique*: "Higher Idealism"

Upon the publication of the *Critique of Pure Reason*, the first reaction was a long silence, which a less confident author than Kant might have interpreted as indifference. But Kant, aware of the enormous novelty that his work would

[3] Among others, the recent works of Fiorilli (2024) about the connection of anthropology to transcendental philosophy and of Morawski (2024) on geography and critical thinking show how this pragmatical disciplines are strictly connected to the concept of philosophy itself.

[4] This was the account of the first review of the *Critique of Pure Reason* that I am going to analyse, but also of the anonymous epistolary novel *Aenesidemus* (1792). Jacobi's interpretation of the thing in itself in the Appendix to the *David Hume* (1787) was also long associated to *Aenesidemus'* critique, but a recent study suggests by Sandkaulen (2019, 169–97) suggests a different reading.

[5] As I shall show, this was the account of Ulrich (1785) and of the anonymous reviewer of his *Institutiones logicae et metaphysicae*.

[6] Malabou (2014) has proposed a philosophical interpretation of transcendental epigenesis. Among the historical studies, see Wubnig 1969; Genova 1974; 1975; Igensiep 1994. Bouveresse (1991) confronts Kant's epigenesis with Frege's critique of psychologism. For a general reconstruction of organicism in transcendental philosophy, Mensch (2013).

bring to the philosophical reflection of the century, greeted the silence with a sly smile, if we can trust what he declares in the Appendix to the *Prolegomena*:

> I feel obliged to the honored public even for the silence with which it for a long time favoured my *Critique*, for this proves at least a postponement of judgment, and some suppositions that in a work, leaving all beaten tracks and striking out on a new path, in which one cannot at once perhaps so easily find one's way, something may perchance lie, for which an important but at present dead branch of human knowledge may derive new life and productiveness (Kant 1783, 135).

However, the first appendix of this work is dedicated to responding to those who wanted to express a judgment on the *Critique* without first conducting that careful examination which should have nourished the initial silence. This refers precisely to the review that appeared anonymously in the *Göttingischen Anzeige der gelehrten Sachen* on January 19th, 1782. The author would only reveal himself in response to this open attack by Kant, in an epistolary exchange, very useful also for the study of the editorial history of the review.[7] Christian Garve explained that he had chosen to write the review already interested in the author, of whom he had read some previous works. But in a short time, he realized how different this work was from the others and how the effort required for the review was immeasurably exceeding the norm. With great difficulty, he had therefore drafted a very long review, trying to account for the breadth and complexity of the work, but aware of having taken on a task beyond his capabilities. Handing over the review to the journal, he had left the editors free to shorten and improve it as they saw fit - it must be remembered that the text was to be published anonymously. However, he received no comments until, finally, he had the published review in his hands. He immediately realized that he could hardly call this text "his" any longer, given the cuts and extensive modifications that had been made to it. The editor of the review, and therefore perhaps its true author, was Johann G. H. Feder, a professor at the University of Göttingen: to him should therefore be attributed all the harsher expressions used towards the *Critique*, while Garve published a version of the review faithful to the original manuscript in another journal, the *Allgemeine Deutsche Bibliothek*. Kant was as condescending with Garve as he was severe towards Feder. However, the relationship between Garve and Kant would continue, and not always in the most relaxed form, if it is true, as Förster has shown, that Garve's *Cicero* is the direct controversial objective of the first part of Kant's *Groundwork*.[8] In this paper, I am not interested in analysing the difference between the two versions of the first review, nor the real relationship between Feder and Garve and between

[7] For the first letter from Garve to Kant, see AA X, 328–33; there are also two letters from Spalding, who mediated between them, to Kant, AA X, 333–4; 347–48; and finally, Kant's answer to Garve AA X, 336–44.

[8] Förster 2000, 123 ff. According to Förster, Garve was also the first person which Kant told his project on the *Opus postumum* and the "gap" problem (Förster 2000, 48 ff.).

the latter and Kant, but for a detailed philological analysis, I refer to other studies.[9] Here, instead, I will only adhere to the first published version of the review, which is, after all, the only one that was the object of Kant's attention, as much as of his public indignation.[10]

The review complains, firstly, about the obscure language used by Kant, as well as about the excessive length of the work. In the cultural *milieu* of the *Aufklärung*, a process of popularization of philosophical practice had begun, in which cultural journals were the primary instrument. As the results of the project on *Philosophical Reviews* abundantly demonstrate, the review itself had a role in this activity, returning to a wider audience the content of a book accessible to few.[11] This also explains why Kant was so annoyed by the negative outcome of the first review, which would influence that wider audience, to whom he finally decided to address the *Prolegomena*. The question of the intertwining between pedagogical and transcendental function in this latter work is extremely interesting and allows us to shed light on the very cosmic concept [*Weltbegriff*] of philosophy, connected with its practical and cosmopolitical [*weltbürgerlich*] primacy. It is not possible here to delve into the concept of "authentic popularity" in transcendental philosophy, but it is enough to know that the *Critique of Pure Reason* certainly did not present itself as a "democratic" work, at least in the immediate sense of public accessibility, and this must have upset enlightened *Populärphilosophen* like Garve or Feder (whichever of the two is actually attributable to the review).

The text, as is still customary today, roughly summarizes the entire *Critique*, to advance an opinion, argued in fact in a rather approximate manner, only in conclusion. However, already in the opening, the reviewer, perhaps believing to return in a synthetic and neutral way the overall intent of the work, actually already expresses his judgment:

> This work […] is a system of higher idealism [*des höhern Idealismus*] or, as the author names it, transcendental; an idealism that encompasses spirit and matter alike, transforms the world and ourselves into representations, and let's all objects consist in appearances through this: that the intellect connects them in a chain of experiences, and reason necessarily attempts, though in vain, to explain them and unite them into a whole and complete system of the world. (Anonymous reviewer 1782, 40).

[9] See Hohenegger (1996, VII–IX). Benno Erdmann and Emil Arnoldt discussed about the editorial history of the *Prolegomena*. Erdmann (1878) thought that *Prolegomena* should be a compendium of the *Critique*, and in his edition underlies all the parts written after Kant read the first review, by contrast Arnoldt (1879) thought that *Prolegomena* were another project, distinct from the compendium one.

[10] Förster (2000, 123 ff.) argues differently and considers the second edition of the review. However, the object of Kant's attention in this case would be the Doctrine of Elements, which is not in question here.

[11] See also the first volume edited by Sgarbi (2024), in particular in Sgarbi's *Introduction*, 7–14.

The designation of Kantian idealism as "higher" hides a certain understanding of the phenomenal appearance [*Erscheinung*] that degrades it to what Kant would indicate as mere semblance [*Schein*]. In fact, the thesis of the ideality of space and time is reduced by the anonymous reviewer to the consideration of sensations as mere modifications of the self: a thesis on which Berkeley's idealism was already based. The reviewer's juxtaposition of Kant with Berkeley is openly denigrating, because the idealism of representations advocated by the Irish bishop was considered, even by Kant himself, a failed attempt to reduce experience to consciousness, which ended up denying the reality of the external world. In conclusion, the review establishes that Kant, instead of choosing the middle path between dogmatism and scepticism, has taken the errors of both: on the one hand, he argues that the categories of substance and of effective reality [*Wirklichkeit*] can only be applied to objects of the external sense, failing to recognize interiority (and therefore the soul), but on the other hand, he brings the entire external world under simple internal representations, reducing nature "to a certain mode of representation and language" (Anonymous reviewer 1782, 48). In the eyes of the reviewer, Kant seems to convert the internal sense into the external, and the external into the internal: thus, like the Humean sceptic, he would consider only external sensations as objects of knowledge, but like a dogmatical idealist he would end up considering these sensations as simple subjective products of the representative faculties. Everything that is commonly called "the world" would therefore be, according to the higher idealism thus reconstructed, nothing more than a play of representations devoid of anchors to reality.

The criticism advanced by the reviewer actually rests on the presupposition, not made explicit, that representations are effects in causal terms of things in themselves. This formulation, which shifts the objection to the level of a use of the category of cause beyond transcendental limits, will be reported more precisely by another sceptical/empiricist critic, Gottlob Ernst Schulze, a professor in Helmstädt before and in Göttingen later, and linked to Feder by personal ties. His most famous work was an epistolary novel that appeared anonymously, *Aenesidemus* (1792), which resonated greatly in Germany. In the novel a Humean-style scepticism was defended against the transcendental philosophy of Kant but especially of Reinhold, who was the explicit controversial objective in the title of the work (*Aenesidemus oder über die Fundamente der von H. Pr. Reinhold in Jena gelieferten Elementarphilosophie*). The *Aenesidemus* has been canonized in the history of philosophy thanks to another review, which marked a fundamental step in the emergence of German idealism. This is Fichte's *Review of Aenesidemus* (1793/94), in which the author of the *Doctrine of Science* deals with the Reinholdian question of the first principle of transcendental philosophy. The "Göttingen school" had a certain influence in the longer *Wirkungsgeschichte* of the distinction between appearances and things in themselves: Arthur Schopenhauer also attended Schulze's courses in Göttingen, from which he was influenced in his interpretation of Kantian thought. Moreover, the question of the ontological understanding of the noumenon continues to be a philosophical or interpretative problem until rather recent times: the juxtaposition of Kant with

Berkeley has been suggested again by Peter Strawson (1966, 6), and there is still an ongoing complex debate between epistemological interpretations[12] and others, much more refined than the Strawsonian one, but still sympathetic to ontologist readings.[13]

Kant did not consider the problem raised by Feder and/or Garve to pose a serious difficulty for the *Critique*. In fact, in both the Appendix and the Preface to the *Prolegomena*, he seems almost to mock his anonymous reviewer. Yet he also regarded it as important to clarify the nature and aim of critical philosophy, and to ensure that future readers would not be misled by the distorted interpretation proposed in that first review. For these reasons, he explicitly rejected the designation of his philosophy as "higher idealism":

> It may be permitted me however, in future, as has been above intimated, to term it the formal, or better still, the critical Idealism, to distinguish it from the dogmatic Idealism of Berkeley, and from the sceptical Idealism of Descartes (Kant 1783, 131).
>
> *Note*: By no means "higher." High towers and metaphysically great men resembling from them, round both of which there is commonly much wind, are not for me. My place is the faithful *bathos*,[14] the bottom-land, of experience; and the word transcendental, the meaning of which has often been explained by me, but not once grasped by my reviewer, (so carelessly has he regarded everything), does not signify something passing beyond all experience, but something that indeed precedes it *a priori*, but that is intended simply to make cognition of experience possible (Kant 1783, 130).

This footnote encapsulates several recurring motifs of Kant's thought, such as his architectural metaphors for metaphysics—whether ruins of a bygone age, a Babel tower whose builders no longer understand one another, or the attempt to reach celestial objects through human and earthly constructions. Above all, however, Kant underscores—here with considerable rhetorical force—that the entire transcendental framework aims at nothing other than legitimating the empirical domain. The transcendental is never given apart from experience, but only in conjunction with it; it is only from experience that its conditions can be inferred. The priority of the transcendental over experience is thus neither temporal nor axiological, but is defined exclusively in terms of the relation between condition and conditioned. Just as without light we would not even have dark-

[12] One of the most important epistemological interpreters is Henry Allison (1983; 2004).

[13] Such as the readings proposed by Langton 1998; Allais 2015; Rosefeldt 2022 in the recent debate.

[14] The expression "Bathos" is used by Kant probably in reference to the Romantic reception of the anonymous work *On The Sublime*, and Alexander Pope's parody *Peri Bathous, or The Art of Sinking in Poetry* (1728) which played on a manuscript transcription error, whereby the sublime, which should have been defined as ἢ πάθους τέχνη (the art of feeling), was instead transmitted as ἢ βάθους τέχνη (the art of bottom-land). For this observation, I am grateful to Lorenzo Pizzichemi for his contribution to the conference in Rome, which is included in this volume.

ness (cf. Kant 1787, B 349), so the conditions become accessible only through the givenness of the conditioned.

In the Appendix, Kant discourages readers from taking the objections of the review too seriously, and refers them instead to a (re)reading of specific passages in the *Critique of Pure Reason*. It is in the Transcendental Aesthetic, where the thesis of the ideality of space and time is explained, that the distance between Kant and Berkeley must be sought; and an explicit refutation of Berkeley's idealism is contained in the resolution of the Fourth Paralogism, devoted to the problem of the ideality of outer relation. This is not the place to provide an exhaustive discussion of the last paralogism—an argument that has been subject to widely divergent interpretations,[15] and of which Kant himself may not have been entirely convinced, as suggested by its removal in the second edition of the *Critique*. The paralogism takes the following syllogistic form:

> 1. That whose existence can be inferred only as a cause of given perceptions has only a *doubtful existence*. 2. Now all outer appearances are of this kind: their existence cannot be immediately perceived, but can be inferred only as the cause of given perceptions. 3. Thus, the existence of all objects of outer sense is doubtful. This uncertainty I call the ideality of outer appearances, and the doctrine of this ideality is called *idealism* in comparison with which the assertion of a possible certainty of objects of outer sense is called *dualism* (Kant 1781, A366–7).

Kant accepts only the first premise. He rejects the second, which posits a causal relation between representations and things in themselves—a relation that would indeed lead to a form of idealism not far from Berkeley's, which Kant labels "empirical idealism" and equates with transcendental realism. The Kantian system, by refraining from any ontological pronouncements concerning the noumenon, instead constitutes itself as transcendental idealism—also termed "empirical realism," since it secures the reality of experience.

In the Appendix to the *Prolegomena*, Kant distinguishes his idealism even more sharply from all earlier forms by identifying the fundamental principle that guides his inquiry:

> The dictum of all genuine idealists from the Eleatic school to Bishop Berkeley is contained in this formula: 'All cognition through the senses and experience is nothing but sheer semblance[16] [*Schein*], and only, in the ideas of the pure understanding and reason lies the truth.'

[15] Many have compared the Fourth Paralogism with the Refutation of Idealism: some have argued the incoherency of transcendental idealism, such as Guyer (1983; 1987, 290–92) and Rosefeldt (2013), by contrast others have defended the system, like Allison (2004, 275–303) and Beiser (2002, 104–31). However, the scientific debate is very wide and I cannot cite every significative article or work here.

[16] In the English translation by Paul Carus the German word *Schein* is rendered in "illusion," but I prefer the weaker expression of "semblance". It seems to me that in "illusion" is meant a purposiveness which is not implied in the *transzendentales Schein*.

> The principle that throughout dominates and determines my Idealism is on the contrary: 'All cognition of things merely from pure understanding or pure reason is nothing but sheer semblance, and only in experience is there truth' (Kant 1783, 130).

Here Kant draws on the semantic distinction between *Schein* (semblance) and *Erscheinung* (appearance), which evidently escaped his reviewers but is essential for understanding how the phenomenal world constitutes objective reality [*objektive Realität*], while every transcendent use of the categories must be regarded as illegitimate. Whereas classical metaphysics, from Plato onward, had construed the empirical world as mere semblance, attributing higher ontological status to entities beyond the senses and possible experience, Kant radically inverts the paradigm: reality is grounded in experience itself, while the great metaphysical "truths" dissolve into nothing more than the inevitable and illusory semblance of human reason.

2. Schultz's Review: A Pre-established Harmony?

Kant's reflection on the status of transcendental idealism and on the very name of his new philosophical proposal was most fruitfully stimulated by another review. This was not, however, a review of a Kantian work itself, but rather a review authored by a loyal Kantian disciple and confidant, Johann Schultz, of the recently published *Institutiones logicae et metaphysicae* (1785) by Johann A. H. Ulrich, a Wolffian-oriented thinker and professor at the University of Jena, who was among the first to lecture on Kant's philosophy.

In his *Institutiones*, Ulrich sought to reconcile the *Critique of Pure Reason* with the traditional Leibnizian-Wolffian metaphysical framework. His central thesis maintained that it was possible to apply the categories to things in themselves, thereby recasting Kant's category of causality as a reformulation of the principle of sufficient reason. This seemed particularly evident to Ulrich in the case of consciousness: by ordering representations in temporal sequence, consciousness would generate a real succession [*wirkliche Succession*] in the course of its transcendental activity—something irreducible to the succession that the intellect must apply to appearances. In Ulrich's view, despite Kant's repeated rejection of any transcendent use of the categories, the *Critique* itself resorted to such a use on more than one occasion, thereby approximating a more traditional metaphysical outlook. Moreover, this procedure did not concern only the principles of the understanding in relation to things in themselves, but also, and above all, the principles of reason. Ulrich interpreted the natural needs of reason as presented in the Dialectic—such as the principle that, given the conditioned, there must also be an unconditioned absolute—as referring to realities grounded in human reason itself. God, the soul, and the world would thus not be mere "ideas of reason", as Kant presents them, but rather "real concepts of reason" [*reale Vernunftbegriffe*].

On the 13th of December 1785, an anonymous review of Ulrich's work appeared in the *Allgemeine Literatur-Zeitung*. Kant was well aware that the author was Schultz, a pupil whom he considered to have grasped the critical system

sufficiently to assist in its dissemination and clarification,[17] and with whom he also commented upon the two versions of the first review of the *Critique* (AA X, 348–54). He therefore expected from his friend's review an explicit defence of the coherence of the *Critique*. Instead, he was disappointed by the indulgence with which Schultz responded to Ulrich's objections. The reviewer did not conclude with a full agreement with Ulrich's, but he discerned a certain affinity in their respective ways of representing Kantian philosophy, especially on issues intersecting with its fundamental principles.

Schultz maintained that the *Institutiones logicae* lacked the demonstrative clarity required to undermine the critical edifice, since it did not directly confront the Deduction of the Categories, upon which the very stability of Kant's system depends. He lamented that in the *Critique*, precisely that section which ought to be the clearest is, instead, the most obscure, leaving room, if not for outright objections, then at least for fundamental doubts about the way experience is constructed. Schultz concentrated his attention on the Kantian concept of experience: if the objective reality of the categories or synthetic concepts is deduced from the fact that without them no experience [*Erfahrung*] would be possible, then it is crucial to clarify what concept of experience is at stake.

Here Schultz invoked a distinction absent from the *Critique of Pure Reason* but introduced by Kant in the *Prolegomena*, specifically in the second section, which, in addressing the possibility of a pure natural science, partly fulfils the function of the Deduction of the Categories. Par. 18–20 in *Prolegomena* are devoted to distinguishing between two types of empirical judgment: judgments of mere perception [*Wahrnehmung*] and judgments of experience [*Erfahrung*]:

> Empirical judgments, so far as they have objective validity, are *judgments of experience* [*Erfahrungsurteile*]; but those which are only subjectively valid, I name *judgments of perception* [*Wahrnehmungsurteile*]. The latter require no pure concepts of the understanding, but only the logical connection of perceptions in a thinking subject. But the former always require, besides the representation of sensuous intuition, particular *concepts originally begotten in the understanding*, which produce the objective validity of the judgment of experience (Kant 1783, 65).

As has been noted (Allison 2015, 292–93), this distinction parallels one proposed by Georg Friedrich Meier in his *Auszug aus der Vernunftlehre* (1752), between intuitive and discursive judgments (par. 319). Intuitive judgments, for Meier, are based on sensations and concern immediate singular experience; discursive empirical judgments, by contrast, require observation and experimentation for their validation. For Kant, however, every judgment is discursive, and the very notion of an intuitive judgment would be contradictory. His formulation, as often, reworks a terminological distinction already present in earlier

[17] For the relationship between Kant and Schultz, see Bonelli Munegato (1992). Schultz wrote also a compendium on Kantian philosophy, whose relation with Kant's *Prolegomena* is still in question (Schultz 1791).

tradition, but employs it with a transcendental meaning. Kant's "judgments of perception" refer to judgments based on the momentary sensation of a single subject, in which the association of a given predicate with a certain object can and indeed must be questioned in order to yield knowledge. Judgments of experience, by contrast, concern the very constitution of objective reality as the coherent totality of experience, universally valid for all subjects. They thus represent a transition from the singular to the intersubjective dimension, a passage that depends on the function of the categories and their applicability to the manifold of experience. Judgments of perception do not involve the table of categories, since they operate with empirical concepts tied to momentary impressions and always open to revision. It is only in the constitution of objective experience that the universal necessity implied by a priori judgments comes into play.[18]

In some respects, this distinction echoes another one drawn by Kant in the logical domain—namely, between preliminary[19] and determining judgments. It is worth noting that in his lectures on logic, preliminary judgments [*vorläufige Urtheile*], also linked to momentary perceptions, are presented as the necessary condition for the elaboration of determining judgments [*bestimmende Urtheile*], which in turn establish the objectivity of experience (AA IX, 74). Knowledge always begins at the empirical level, but its constitution into a coherent and intersubjectively valid system depends on the determination of the transcendental structures at work. Judgments of perception, however, cover a broader scope than preliminary judgments, since the latter must first be sifted through the identification of prejudgments [*Vorurtheile*] (AA XVI, 409). A mere judgment of perception, as the inner state of a singular consciousness, may thus harden into a prejudice if taken as a principle without proper caution. By contrast, the preliminary judgment appears to be a merely subjective judgment that, once tested for validity, may ultimately be elevated into a determining judgment of the understanding, which implies the employment of a transcendental category.

[18] On this point Béatrice Longuenesse and Henry Allison were in controversy. Longuenesse (1998; 2000) argued that categories played a specifical synthetical role in judgments of perception, on the contrary Allison (2015) thought that categories have only a subsumptive function in judgments of experience. Longuenesse (1998, 243–44) also interprets this *synthesis* of the categories as the true meaning of "epigenesis of pure reason", which precedes the determination under intellectual *subsumption*. However, on this point there is an older debate: among others, Kemp Smith (1918, 288–89) found inconsistent par. 18–20 of *Prolegomena* because it seems that a certain kind of consciousness or awareness (the one implied by judgments of perceptions) is possible without categories. By contrast, Uehling (1971, 44–5; 1996) argues that this distinction means that there are other, non-cognitive ways to be in relations with things, and refuses the possibility (chronologically understood) for judgments of perception to become judgments of experience.

[19] Allison also suggests this parallelism (2015, 304–5). I am following Allison's choice to translate the German *vorläufige* with "preliminary" instead of "provisional" precisely because these judgments shall be distinct from prejudices insofar as they are the *termini a quo* of scientific knowledge–on the other hand, determining judgments could be considered the *termini ad quem* of this process.

Coming back to the *Allgemeine Literatur-Zeitung* review, Kant appeared ambiguous in Schultz's eyes precisely in his use of the notion of experience. For if by "experience" one understands *Wahrnehmungsurteile*, the result would be an evident paradox for transcendental philosophy: in order to judge empirically, each subject would already need to have formulated a synthetic a priori judgment. Schultz illustrates this with the example of a rock heated by the sun: in order to issue a judgment of perception regarding the warmth of the rock, one would already have to know that sunlight is its cause. According to the reviewer, Kant falls into this ambiguity several times in the *Critique*, especially in the Analogies of Experience, where the manifold of appearances must be successive, and yet succession is not contained in the phenomena themselves, but only in their connection within the intellect. As was already the case with the Garve/Feder review, this second review seems to highlight difficulties that remain unresolved in the interpretations of the transcendental system, as Allison (2015, 294) notes in his reconstruction of the Deduction, where he associates Schultz's interpretation with that of Guyer (1987, 92–121, in particular p. 94). Although this is not the place to examine Guyer's reading in detail, it is worth noting the enduring relevance of ontological or semi-ontological interpretations of the *Critique of Pure Reason*.

Schultz himself acknowledges that this was clearly not Kant's intention, which was rather to present the applicability of the categories as a condition of experience understood in terms of *Erfahrungsurteile*, i.e. of objective reality. Yet even in this case, according to the brief analysis offered in the review, the Deduction faces irresolvable problems, since Kant's argument collapses into a mere tautology. If the categories bore no necessary relation to appearances, perceptions would remain a disordered multiplicity and no knowledge would be possible at all. Both routes therefore lead to the same outcome: the presupposition of the union between a priori categorical structure and world of experience, demonstrated inconsistently in the first case, and tautologically in the second. In conclusion of his review, Schultz proposes to resolve the difficulties of the Deduction of the Categories by appealing to the will of a benevolent creator, who might have so ordered the human understanding that its concepts are perfectly harmonized with the laws of nature, thereby guaranteeing both the objective reality and the universal communicability of human knowledge:

> Suppose appearances were an unregulated multitude, a mere aggregate of *simultaneis* and *successivis*, which seems to us to conform to rules only because their existence, in accordance with spatial and temporal relations, has been most wisely *pre-established* by the will of a creator in such a way that certain appearances (which in themselves are nothing but representations within us, or determinate modifications of our consciousness) would always follow others in a fixed order, without there being the least *real* connection between the appearances themselves; then the categories of *cause* and *community* would not be applicable at all to the appearances of nature, and in that case our understanding, rather than prescribing laws to nature, would derive its merely apparent conformity to law from *a posteriori* perceptions (Anonymous reviewer 1785, 299).

In this way, however, the entire mission of transcendental philosophy fails, for the critical turn is reduced to transferring Leibniz's pre-established harmony from the ontological to the epistemological plane, entrusting the ultimate ground of knowledge to the benevolent will of a personal creator.

3. Kant's Response to Schultz (and Ulrich) in the *Metaphysical Foundations*

Kant, who had expected a different outcome from Schultz's review, was concerned to respond to the objections raised by his friend. Even before clarifying the difficulties pointed out by the reviewer, however, it was necessary to take up the task that Schultz had failed—namely, to answer the attack that Ulrich had already directed against the critical system. For this reason, I shall follow two different lines of Kant's response to the review, which serve two distinct functions. In fact, we have only one explicit reference in a published text by Kant to his reviewer, in a long footnote in the Preface of the *Metaphysical Foundations of Natural Science* (1786), a text which, like the *Prolegomena*, appeared in the period between the first and second editions of the *Critique*. It is nevertheless possible to trace another, indirect reference to this review through the resumption of the theme of a pre-established harmony between intellect and nature, expressed through the metaphor of preformation. As is well known, preformation was a biological theory according to which the embryo was already complete in all its parts at birth. The preformationists clashed with the supporters of epigenesis, who instead believed that the embryo developed in response to environmental stimuli. That Kant, in the second version of the Deduction, refers to transcendental philosophy as "a system of the epigenesis of pure reason" is very well known. Less investigated, however, has been the contextual reference to the discussion with Schultz, which we will attempt to reconstruct here through the study of the debate, in the hope that it may contribute to a better understanding of par. 27 of the Deduction.

In the note in the *Metaphysical Foundations*, Kant, in considering the objections of Ulrich and Schultz, distinguishes two issues that deserve to be treated separately. The first concerns the limitation in the use of pure reason, which takes the place of the answer that Schultz should have given to Ulrich's objection. The second, much more delicate, concerns an internal issue of the Deduction, namely the difficulty of the pre-established harmony between intellect and world brought to light by Schultz. In a way that may perhaps be surprising, Kant in the note restricts the main purpose of the *Critique* to the first issue—namely, to demonstrate *that* the categories are applicable only to the objects of experience—whereas what is the objective of the Deduction, namely *how* this takes place, is presented as of secondary importance:

> If we can prove *that* the categories which reason must use in all its cognition can have no other use at all, except solely in relation to objects of possible experience (insofar as they simply make possible the form of thought in such experience), then, although the answer to the question *how* the categories make

> such experience possible is important enough for *completing* the deduction where possible, with respect to the principal end of the system, namely, the determination of the limits of pure reason, it is in no way *compulsory*, but merely *meritorious* (Kant 1786, 10).

In the course of the note, Kant also acknowledges that there are considerable difficulties in the published version of the Deduction, and declares that he is working on an improved edition, although the modifications should concern only the aspect of exposition and not the content.

At this point, it is legitimate to ask why Kant relegates to such a secondary level a part of the *Critique of Pure Reason* that has never appeared secondary to the eyes of interpreters. If the declaration that the Deduction is not necessary but only meritorious may seem out of place—since the entire critical system appears to depend on the possible mediation between intuitions and concepts—one must nevertheless recognize that, with regard to the advancement of metaphysics as a science, the great novelty marked by transcendental philosophy consists in the reversal, already noted above, of the concepts of reality and semblance. In relation to this discovery, the investigation into the use and applicability of the categories constitutes a complement. However, one must also take into account the context in which this statement appears. For here Kant's polemical target is Ulrich, a rationalist who attempts to overturn the critical limits by reducing transcendental philosophy to the Leibnizian-Wolffian tradition. It is thus against the dogmatic objection that Kant reinforces the sceptical-empiricist aspect of the *Critique*—namely, the limitation of the use of the categories to the objects of possible experience. The arguments briefly repeated, or rather restated in the note, are those of the *Aesthetic* on the ideality of space and time, and thus on the possibility of synthetic a priori judgments, together with the validity and completeness of the table of categories. Once the transcendental restriction is admitted, the principal aim of critical philosophy is achieved: for it consists in the determination of the limits of pure reason, whereas the task of explaining how the application of the categories to experience occurs is not "necessary" for this framework, but only "meritorious". As for this second issue—whose importance is not denied—Kant nevertheless avoids pronouncing himself, in fact renouncing to answer Schultz's objections. Kant, however, acknowledges that the difficulties which led the reviewer to resort to a doctrine of pre-established harmony are due not simply to the obscurity of the exposition in the first edition, but to the "common fortunes of the understanding in its investigations, in which the shortest way is commonly not the first way that it becomes aware of" (Kant 1786, 11). Kant thus leaves the reader in doubt about the nature of the promised changes in the second edition, whether they are merely improvements in exposition or also in content. The hypothesis of divine harmony is, however, vigorously rejected, since it would reduce the objective necessity of the categories to a mere contingency that appears necessary only subjectively, precisely as Hume had maintained when he explained causal connection by means of habit. The response that must be sought, and which is lacking in the footnote, is there-

fore the one to Schultz's sceptical objection, rigorously distinguished by Kant from Ulrich's dogmatic objection.

4. The Argument of the Refutation of Idealism

As anticipated above, a terminological resumption of the issues raised by Schultz's review can be found in the B Deduction, where in par. 27 Kant distinguishes between *generatio aequivoca*, preformation and epigenesis of pure reason. Before turning directly to this dense paragraph, however, it is helpful to make some more general remarks about the changes between the two editions of the *Critique*. Schultz's review, although much more refined in its arguments than that of Feder and/or Garve, ultimately does not reach significantly different conclusions: critical philosophy appears to oscillate between a Leibnizian-style idealism—grounded in a pre-established harmony between intellect and nature that would justify objective reality—and the radical scepticism of Hume, into which it would risk falling. It was precisely the theme of idealism and its refutations that, as is well known, stood at the center of the revisions of the second edition. The section on the Fourth Paralogism (concerning the ideality of the external world), to which Kant had referred in his answer to the first review, disappears from the 1787 version. It is replaced by the new *Refutation of Idealism*, no longer located in the Dialectic but rather in the Postulates of the Analytic of Principles, where Kant introduces the critical concept of "objective reality". In this place is not possible to deal in detail with the argument of the Refutation and its differences with the former one, but will be given just a general sketch of the question.

The aim of the Refutation is to establish the correlation between inner and outer sense, and thus the necessity of external representations in order to affirm the existence of the empirical subject. The argument in fact relies on other passages of the *Critique*—some of those modified in the second edition—especially in the Aesthetic, in the First Analogy of Experience (on the permanence of substance), and, above all, in the B Deduction. It is only in this second version of the Deduction that Kant introduces the problem of self-knowledge, which implies an ego-splitting into transcendental and empirical consciousness. This issue is addressed in par. 24–25, where Kant explains that the object of inner sense is given solely through the material of external representations; in this way the dependence of the inner on the outer is demonstrated. On the basis of this theoretical advance, the *Refutation* demonstrates the link between empirical consciousness and the real existence of spatial objects in the following way:

> I am conscious of my existence as determined in time. All time-determination presupposes something *persistent* in perception. This persistent thing, however, cannot be something in me, since my own existence in time can first be determined only through this persistent thing. Thus, the perception of this persistent thing is possible only through a thing outside me and not the mere representation of a thing outside me. Consequently, the determination of my

> existence in time is possible only by means of the existence of actual things that I perceive outside myself. Now consciousness in time is necessarily combined with the consciousness of the possibility of this time-determination: Therefore, it is also necessarily combined with the existence of the things outside me, as the condition of time-determination; i.e., the consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me (Kant 1787, B 275–76).

The distinction between "a thing outside me" and "the mere representation of a thing outside me" made in this passage has been read (Guyer 1983) in a realist key, taking the object of the proof to be the existence of things in themselves behind the phenomena. More likely, however, this distinction should be understood in terms of the constitution of experience as a coherent whole, in the sense of the "objective reality" discussed in the preceding paragraph, namely the Second Postulate of Empirical Thought. Accordingly, the "things outside me" can be read as representations in the sense of the *Erfahrungsurteile* of the *Prolegomena*, whereas the "representations of things outside me" would correspond to the immediate sensations of the individual subject, that is, the *Wahrnehmungsurteile*. In this way, the *Refutation of Idealism* shows that the metaphysical question about the reality of the external world is misguided: it conflates empirical consciousness with transcendental consciousness on the one hand, and the transcendental concept of world with the empirical concept of objects of outer sense on the other. From the empirical standpoint, however, the question is simply meaningless, since the very material of inner intuition is given only in outer sense, which is constituted as objective reality through the activity of transcendental imagination. The confusion between transcendental and reproductive imagination—which, according to Kant, had led Descartes to doubt external representations—thus conceals a more fundamental confusion, one that lies at the level of the concepts of consciousness and world that are at stake.

5. The New Deduction: A System of the Epigenesis of Pure Reason

We can thus read par. 27 of B Deduction within the thematic framework of clarifying the concept and the terminology of transcendental idealism, as well as the revisions made between the two editions of the *Critique*. This paragraph closes the Deduction and introduces the Analytic of Principles, where Kant intends to explain how the categories are applied to experience. Before delving into this analysis, he raises one of the fundamental questions of the *Critique*—the *how*, a task deemed only *meritorious* in the note to the *Metaphysical Foundations*!—namely: how can a necessary accord between the categories and nature be thought? Kant indicates three possible paths, the illustration of which connects to the lexical domain of Schultz's review.

The necessity of the agreement between categories and experience can be explained in two primary ways: "either experience makes these concepts possible, or these concepts make experience possible" (Kant 1787, B 166). Clearly, regard-

ing the categories, Kant favours the second hypothesis. It is, however, interesting to focus on the terms he proposes for these two positions, borrowed from the biological sciences. The former, i.e. the empirical generation of concepts, is called *generatio aequivoca*, whereas the latter, reflecting the demands of critical inquiry, is named a "system of the epigenesis of pure reason". In this way, Kant alludes to a millennial debate, already originated at the times of Aristotle and Galen, concerning the generation of living organisms and the evolution of species, which resurfaced in the modern era with particular intensity.

Generatio aequivoca, also called spontaneous generation, was the classical theory according to which living organisms could arise spontaneously from non-living matter, definitively refuted only by Louis Pasteur in the 20th century. By contrast, the theory of epigenesis was a kind of *generatio univoca*, according to which organisms instead develop gradually from an original seed, so that the growth of new parts can be determined from an initial embryo. Kant introduces between them an intermediate term, or a third possibility: the so-called theory of preformation, which was another kind of *generatio univoca*, traditionally opposed to epigenesis. Preformationists, widely diffused at the time Kant wrote, believed that the generation of a living being depended on original seeds rather than inert matter, but in these seeds, they placed the entire organism of the adult animal, already structured in all its parts. For readers familiar with Schultz's review, it is not difficult to recognize in the theory of preformation the traits of that pre-established harmony between intellect and nature that Kant's pupil found out in the *Critique*. Even more, in par. 36 of *Prolegomena* Kant already counterbalanced the possibilities of the empirical origin of laws of nature, and of nature's derivation from these *a priori* laws: the fact that here the third option of preformation is not mentioned, let imagine that Kant thought on it after having read Schultz's review. Indeed, Kant himself guides the interpretation in this way, associating a system of preformation of pure reason with the will of a good creator who ensures the harmonious agreement between intellect and nature. If one adopts a preformationist theory for reason, the categories would not function as conditions of experience, but as "subjective predispositions for thinking, implanted in us along with our existence" (Kant 1787, B 167): critical philosophy would thus be reduced to a form of psychologism resting ultimately on merely arbitrary subjective necessity, which could fail for future representations. The fundamental error in this reading of the *Critique* lies in separating condition and conditioned, the laws of the intellect and the nature they determine. This idea assumes that nature is something other than the world of phenomena, in which only our knowledge is possible, thus falling back into Berkeleyan idealism, that, as has been argued, degrades *Erscheinung* to mere *Schein*. The concluding paragraph of the B Deduction is therefore yet another, new refutation of idealism, aiming to distinguish critical philosophy from both empiricism (*generatio aequivoca*) and dogmatism (preformation) and reveal a more complex relationship between the transcendental structures and the empirical plane. How exactly this occurs, however, remains somewhat unclear.

When speaking of nature in Kant, it is important to recall the distinction, already introduced in the Deduction and fundamental in the third *Critique*, between "nature in general" [*Natur überhaupt*], i.e., nature considered in accordance with the laws of the intellect in space and time, and "particular nature", which appears in empirical observation of specific phenomena and obeys empirical or particular laws, not determinable a priori but all reducible to the categories (Marcucci 1996). In the Deduction, it is therefore nature in general that is at stake, regarding which the categories are "first principles spontaneously thought a priori" [selbstgedachte *erste Prinzipien a priori*]. It appears thus clear why the *Critique* is not a system of preformation of pure reason, yet it remains less obvious in what sense reason should possess an epigenetic structure.

To better understand what Kant means by epigenesis, it is useful to refer to par. 80–1 of the *Critique of the Power of Judgment*, where these biological theories are considered in relation to the concept of finality.[20] In fact, par. 80 makes clear that *generatio aequivoca* works only through natural mechanism, whereas *generatio univoca* lets teleology in nature be possible. Then, the classification of positions on generation differs from that in par. 27 of the first *Critique*: preformation, based on the creation of original seeds, is opposed to occasionalism, according to which the divine being would intervene multiple times in nature to create individual living beings. If this latter position is incompatible with philosophical reasoning, then it is only with preformation that one engages within a rational discourse. Preformation is further subdivided into two forms, individual and generic. The former sees seeds containing all individual organisms at the moment of the creation of the world, easily linked by Kant to a form of occasionalism, that places supernatural intervention at the original instant of creation rather than over created time, in a way that generates complications in scientific comprehension of the natural world, such as in the case of hybrid generation. Both occasionalism and individual preformation are thus for Kant ways to attribute an objective finality to organisms in the world, depending on the Creator. On the other hand, the second mode of preformation concerns not the individuals but the species, hence termed "generic," or "epigenetic:" it is then a reflective teleological system, referred only subjectively to the faculties of knowledge. Par. 81 of *KU* concludes with praise for Blumenbach, a biologist who, according to Kant, avoided a reckless use of epigenesis, because "at the same time, however, he leaves natural mechanism an interminable but at the same time also unmistakable role under this inscrutable *principle* of an original *organization*". (Kant 1790, 292).

This description of epigenesis thus clarifies the Deduction paragraph. If epigenesis is a generic preformation, it allows understanding organism development

[20] In fact, Kant deals with epigenesis and preformation several times, starting in his pre-critical writings and later in *Geography* and *Anthropology*. Here, however, I am not interested in reconstructing Kant's biological theory (which also could be useful for this reconstruction and is very interesting in the anthropological field), but only in explaining the transcendental metaphor in the Deduction. For this reason, it is sufficient the reference in the *Critique of the Power of Judgment*. For an account of biology in Kant's geography and anthropology, see, among others Cohen 2006; Marcucci 2010; Demarest 2017.

according to the purpose of species reproduction, which does not determine individual's particular characteristics, but only its original organization according to the broader unity it belongs to. Kant thus understands epigenesis as a force, an original impulse that unifies under a single, finalizing principle the multiplicity of individual organisms appearing in nature. Though the principle itself is "inscrutable" to us, it appears "unmistakable" because the entities of nature present themselves in a way that necessitates recourse to a finalistic unity for comprehension.

At the end, par. 27 of *KrV* still does not aim to explain *how* the agreement of categories with experience occurs, as this will be the object of the Analytic of Principles. Even less is it Kant's aim to explain *why* this agreement exists and from what it derives. Transcendental analysis is not genetic but static: that this agreement exists is a fact, as is the existence of Newtonian physics in the B Introduction to the first *Critique* (Kant 1787, B 20–1), countering sceptical objections. The agreement of cognitive faculties with the empirical world thus appears contingent, insofar as it could have been otherwise, as it is exemplified by the intuitive intellect. But this agreement is yet also radically necessary, since it determines all that is really possible for a sensible rational being. Since transcendental structures present themselves only within experience and intertwined with the empirical, from which they are inseparable, critical analysis does not reveal innate subjective structures, but those original spontaneous forces that make experience possible in general. The biological metaphor provides access to the plastic structure of the transcendental, always in contact with the environment and the empirical, yet also teleological and aimed at the rational unification of the multiplicity of experience. Transcendental epigenesis and biological epigenesis of the third *Critique* operate on two distinct but interdependent levels. The first concerns "nature in general" and its *a priori* laws, the second the investigation of particular laws in empirical nature. However, as evidenced by the study of contingency in Kant's last critical work, the concept of finality, essential to the unifying structure of categories, requires empirical observation of those natural entities, which are comprehensible for us only in terms of finality: the organisms.[21] If the transcendental plane is a condition for experience, at the same time certain conditioned experiences allow for its enlargement and redefinition. Thus, becomes clearer Kant's claim in the First Introduction to the *Critique of the Power of Judgment*, according to which the study of teleological judgment constitutes a new component of the system of the *Critique of Pure Reason*:

> Our concept of a technique of nature, as a heuristic principle in the judgment of it, will belong to the critique of our faculty of cognition, which indicates what occasion we have to make such a representation of it to ourselves, what origin this idea has, whether it is to be found in an *a priori* source, and also what the scope and boundary of its use are; in a word, such an inquiry will belong as a part to the system of the critique of pure reason, but not to doctrinal philosophy (Kant 1790, 10–1).

[21] On the relation between categories and finality, see Marcucci 1991, for this point in particular pp. 31–2.

That the critical system is epigenetic means that the transcendental itself is plastic, immersed in experience, gathered incompletely and contingently, perceived at a certain stage in the development of reason: only by tracing back to the original seed can one grasp its teleological unity. This teleology is limited from the perspective of a finite being, determined and renegotiated each time within the contingencies of experience. The formative force of matter is limited, as in Blumenbach's reconstruction, by the parental seed that characterizes the species, yet this does not prevent development in an environmental and evolutionary process. It is precisely this determination that, by limiting, unifies and makes comprehensible and meaningful that formless "multiplicity of experience".

As it has been argued for the distinction between *Wahrnehmungsurtheile* and *Erafhrungsurtheile*, epigenesis also attempts to guarantee the passage from one singular consciousness to the intersubjective standards of a rational community. Genova (1974, 271–2) has argued that what is in question through the analogy of epigenesis is the "*universal* consciousness", which makes possible the scientific community of rational inquirers as a "transcendental we" through the abstraction from individualities and self-interests. I would add that, if this transcendental unifying force, as a seed, is what makes knowledge shareable, at the same time this seed develops itself under the influence of the "epistemological environment" (as Genova himself calls it) which stimulates the process of thinking. The environment could be the sensation that differentiates this thinking activity, but could still be the community of inquirers itself, which is also made of human beings, historically and culturally determined. Thus, I suggest to read epigenesis as the imagine of historicity and contingency of this same transcendental universal force, which makes experience in general possible.

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