THE UNIVERSE OF SCIENCE. THE ARCHITECTONIC IDEAS OF SCIENCE, SCIENCES AND THEIR PARTS IN KANT

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I argue that Kant has developed a broad systematic account of the architectonic functionality of pure reason that can be used and advanced in contemporary contexts. Reason, in the narrow sense, is responsible for the picture of a well-ordered universe of science consisting of architectonic ideas of science, sciences and parts of sciences. In the first section (I), I show what Kant means by the architectonic ideas by explaining and interrelating the concepts of (a) the faculty of reason, (b) ideas (as principles), (c) method, and (d) sciences of reason. Thereafter (II), I think through his holistic understanding of science and scientific progress and suggest differentiating between four levels of use of architectonic ideas, drawing on the metaphor of a well-structured universe as imagined by Kant in his work on the Universal Natural History and Theory of the Heavens. *I also claim that each possible idea of reason can be (apart from its primary function) additionally regarded as a fourth-level architectonic concept when explicitly conceived as an object of (e.g. philosophical) studies, i.e. from a mere methodological perspective. In the final section (III), I unveil the potential of Kant's theory by pointing out how this architectonic methodological function of pure reason is tacitly used in Karl-Otto Apel's contemporary philosophical research programme.*

***Keywords*:** *reason, ideas, architectonics, sciences, systematicity, use of reason in contemporary philosophy.*

Introduction

While (1) the Kantian philosophy of science, (2) the "Architectonic" chapter of the *Critique of Pure Reason* and (3) his theory of regulative ideas have become the focus of recent research,[2] the topic of "architectonic ideas" has not received enough attention and has been addressed only in

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2 There are too many recent publications on (1) different aspects of the Kantian philosophy of science to list them all here. For analyses which include general inquiries into the nature of the Kantian philosophy of science see e.g. Sturm (2009), Watkins (2001), Friedman (1992) and Kitcher (1983). For recent publications on (2) Kant's *Architectonics* see Gava (2014), Switzer (2014) and Manchester (2008). (3) For Kant's concept of regulative ideas and their science-related functions see Meer (2019), for transcendental ideas in general Willaschek (2018), Bunte (2016), Pissis (2012) and Klimmek (2005).

passing. Although, admittedly, not a few authors mention the Kantian notion of *ideas of sciences*, they are rather concerned with adjacent topics than with an in-depth exploration and explanation of the concrete functionality of pure reason regarding this kind of ideas.[3] The topics include the systematicity and the interrelation of the sciences (*cf*. McRae, 1957), the relation between the sciences and the (practical) ends of reason (*cf*. Sturm, 2020; Gava, 2014), the historical roots of the Kantian conceptual framework (*cf*. Switzer, 2014; Sturm, 2009, pp. 131-146) etc. I want to choose a different path and focus on the architectonic *functionality*, *capability* and *procedure* of reason (in the narrow sense) *per se*.[4] I argue that Kant has developed an account of the methodological functionality of *pure reason* regarding the scientific practice of systematic planning, developing, acquiring and ordering of knowledge under the guidance of *architectonic ideas*, which is broader and richer in content than often presented in Kant research. Moreover, I aim to show that it is not – so to speak – a mere "exhibit" in the "museum of the history of philosophy", but an important and plausible theoretical endeavour that can be applied and advanced in contemporary contexts. I will proceed as follows: First (I), I will explain the basic concepts I will be working with: (a) *the faculty of reason*, (b) *ideas (as principles)*, (c) *method*, and (d) *sciences of reason*. After that (II), I will distinguish four levels in the use of architectonic ideas, using the metaphor of a well-structured universe as imagined by Kant in his work on the *Universal Natural History and Theory of the Heavens*. In the final section (III), I will show through the example of Karl-Otto Apel's transcendental pragmatism how the methodological function of pure reason, which deserves its own proper account, is tacitly used in contemporary philosophy.

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Kant states in the "Architectonic" chapter of his first *Critique* and in his lectures on logic, that "[i]n all sciences, above all in those of reason, the idea of the science is its universal *abstract* or *outline*, hence the extension of all the cognitions that belong to it. Such an idea of the whole – the first thing one has to look to in a science, and which one has to seek – is *architectonic*, as, e.g., the idea of jurisprudence" (*Log*, AA 09, p. 93; Kant, 1992, p. 591). Whether we are dealing with systematic knowledge of natural sciences, jurisprudence or philosophy, we have to recognize and

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3   The ideas of sciences are not to be confused with the transcendental ideas, whose number is limited and whose function (as regulative ideas) is completely different. They are also not merely a subtopic to "regulative ideas" in general. For a complete and tabular overview over the (seven) kinds of ideas in Kant and the corresponding different functions of reason in the narrow sense see Lewin (in press). Some of the ongoing results of my studies were also published in Lewin (2020) and some of the initial deliberations in Lewin (2018).

4   I herewith follow the Kantian distinction between the reason in the narrow sense (which is exclusively concerned with ideas and principles of higher order) and the reason in the wider sense (as the whole of the rational faculties including the understanding and the reason in the narrow sense). By speaking simply of "reason" in some passages of this paper, I will mean the reason in the first sense.

presuppose that in "every system there must be an idea as the whole which determines the arrangement and the purpose, and this idea represents the systematic unity"[5] (*V-Lo/Pölitz*, AA 24, p. 530; transl. M L). Kant develops in these and similar passages on "the art of systems" (*KrV*, A 832 / B 860; Kant, 1998, p. 691) a certain methodology and understanding of how scholars produce and acquire systematic knowledge using their faculty of reason in the narrow sense. For Kant, the term "idea" is strictly reserved for designating the highest and purest kind of mental representations. In his metaphysics of mental powers, reason in the narrow sense, alternatively called "the faculty of principles", is responsible for creating and implementing this kind of representations to guide our will and our understanding. Due to this function, they can be regarded as presuppositions, tasks, purposes, problems, or in general: principles of higher order that reason inevitably imposes on us in several different fields of acting and knowing. The term "principle" is ambiguous in Kant. It may mean – according to the German word "Grund*satz*" – a certain binding rule based on a cognition and in form of a *sentence*. The principles of understanding are examples of this. In cases, however, when it is used interchangeably with "idea" (*cf. KrV*, A 569 / B 597, A 619 / B 647, A 672 / B 700; Kant, 1998, pp. 552, 577, 606 etc.), it indicates – based on the Latin "principium" (beginning) – a certain starting point imagined (*vorgestellt*) or projected by reason in the narrow sense. In such cases, a principle is a leap ahead, an anticipation of a result that all efforts of understanding in combining different elements of cognitions should lead to. This leap produces a gap between the actual (conditioned) and the imagined (condition), whereby reason gives the latter the form of absoluteness and priority over the former, and commands the understanding and the will to act according to the principle and to bridge this gap. For this purpose, reason formulates maxims; it expands representations such as the infinity of the universe to sentences, such as continue the process of discovery and understanding of the universe as if it were infinite (*cf. KrV*, A 672 / B 700; Kant, 1998, p. 606; A 685 / B 713; Kant, 1998, p. 613).

The general definition of idea (or principle) that Kant gives us at the beginning of the "Transcendental Dialectic", is of a concept of reason "to which no congruent object can be given in senses" (*KrV*, A 327 / B 383; Kant, 1998, p. 402). It is, however, bound to the terminology of his theoretical philosophy (to the opposition "concept of reason" (A) vs. "object given in senses" (B)) and is not an all-encompassing definition. Kant will slightly change it after examining several other functions of the faculty of principles in different fields of human acting, especially with respect to the exceptional status of aesthetical ideas. An example for a more general version can be found in his *Lectures on Pedagogy*: "An idea is nothing more than a concept of perfection which is not yet to

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5   „*In jedem System muß eine Idee als das Ganze seyn, die die Einteilung und den Zweck bestimmt, und diese Idee macht die systematische Einheit aus*."

be found in experience"[6] (*Päd*, AA 09, p. 444; transl. M L). The basic determination expressed in this definition is that there is an assumption of something so perfect (demanding, pure, and complete) (=A), that a particular something (=B) does not meet the posited demands. For example, an aesthetical idea like the beautiful does not really originate from our reason, but from our faculty of imagination (*Einbildungskraft*), as Kant states in the third *Critique*. It falls, however, under the general definition of ideas, because the imagination of beautiful is so elusive that our understanding cannot fully reach and describe it (*cf. KU*, AA 05, pp. 313-317, 342-344; Kant, 2000, pp. 191-195, 217-219). Analogously, when Kant speaks of ideas of sciences in the chapter on the *architectonic of pure reason* in his first *Critique*, he differentiates between (A) a pure concept of a science and (B) a *schema,* which contains the outline and a subdivision of the elements of a science. Their interrelation, which can be also described in terms of a perfect archetype and a not-fully-appropriate image of the same thing (ectype) (*cf. KrV*, A 838 / B 866; Kant, 1998, p. 694), underlie all sciences of reason: "Nobody attempts to establish a science without grounding it on an idea. But in its elaboration the schema, indeed even the definition of the science which is given right at the outset, seldom corresponds to the idea; for this lies in reason like a seed, all of whose parts still lie very involuted and are hardly recognizable even under microscopic observation" (*KrV*, A 834 / B 862; Kant, 1998, p. 692). Hence, a pure concept of a science is (A) a vague and elusive idea, which can be given only partially *in concreto*, and it is (B) in a description and systematic schema of a science, which never completely matches the original representation or the archetype.

I suggest calling these scientific-praxis-related ideas – to clearly distinguish them from the "transcendental", "theoretical", "practical", "aesthetical", "religious", "political" etc. principles of reason in the narrow sense – *architectonic* (*cf. Log*, AA 09, p. 93; Kant, 1992, p. 591; *KrV*, A 833 / B 861; Kant, 1998, p. 692), or *methodological ideas*. They are used to create systematic unities of knowledge, especially, as Kant states, in the sciences of reason (*cf. Log*, AA 09, p. 93; Kant, 1992, p. 591). The "Architectonic" chapter of the first *Critique*, as well as the related passages on the "art of systems" do not only answer the question of how a metaphysical system can be built out of the material thoroughly examined and chosen by a transcendental philosopher, but also contain aspects of Kant's general philosophy of rational sciences. The procedure of creating (A) methodological (architectonic) ideas and (B) basic outlines is common among transcendental philosophy (i.e. critique, as part of metaphysics), metaphysics, anthropology, ethics, jurisprudence, natural sciences etc. They all are (1) sciences (in Kant's broad understanding of the term "science"),[7] which are (2) rational in the sense that they are not a mere (empirical) accumulation of facts, but make up a (3)

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6   „*Eine Idee ist nichts anderes, als der Begriff von einer Vollkommenheit, die sich in der Erfahrung noch nicht vorfindet.*"

7   For a detailed analysis of Kant's concept of science see Sturm (2009, pp. 128-182).

system under (4) the general purposes, essential ends and principles of reason,[8] and (5) corresponding methods. The points (3)-(5) are crucial for certainty and universality of a science. In Kant's peculiar and – against the backdrop of the previous history of philosophy – innovative view, a scientific system is not and should not be based on a mere compilation of parts (the original and general meaning of the Ancient Greek "σύστημα" (a whole compounded of parts) is based on "συνιστάναι" (to combine, to unite, to set something together)). Metaphorically speaking, it is neither enough to collect similar puzzle pieces nor to unite them – even using a strict, e.g. mathematical, method.[9] A scientist has and should have an idea of reason as a preliminary vague picture of the whole puzzle, and determine its purpose, before combining and ordering the pieces to a whole of a science. An example for this is Kant's own *Idea for a Universal History with a Cosmopolitan Purpose* (1784). In this essay (A) he develops a concept of a historical science based on the idea that human reason – being one of our natural capacities – is predestined to reach its full potential throughout the course of history. And (B) he sketches and points out several important moments that should be considered during the realisation of this project. Without (A) and (B), history as a science would be nothing more than knowledge of existing historical facts.

The architectonic or methodological principles are therefore inevitable conditions in the field of sciences of reason for the construction and acquisition of systematic knowledge. The understanding of their functions is a part of the general methodology of scientific systems. A method, in theoretical (architectonic) perspective, is for Kant "a procedure *according to principles* of reason, through which alone the manifold of a cognition can become a system" (*KpV*, AA 05, p. 151; Kant, 2002, p. 189). This is neither to be confounded with methods in practical perspective nor with methods in empirical sciences. At the end of *Critique of Practical Reason* we find a methodology which deals with the pedagogical and didactical issues of "founding and cultivating genuine moral attitudes" (*KpV*, AA 05, p. 153; Kant, 2002, p. 191). The theoretical (architectonic) methodology is, however, in the Kantian view a part of logic, which examines ways to operate with systematic scientific knowledge. Its main goal is the *logical perfection of cognition*, which "consists in its distinctness, thoroughness, and systematic ordering into the whole of a science" (*Log*, AA 09, p. 140; Kant, 1992, p. 630). This "systematic ordering into the whole of a science" – if it should be more than a mere accumulation of parts – is, above all, based upon the capacity of reason in the narrow sense to create and implement architectonic ideas.

II

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8   The relationship between the practical ends of reason and architectonic unities is discussed in detail in Gava (2014) and Sturm (2020).
9   For Kant's critical attitude towards the mathematical method of construction of systems (by example of Wolff and Meier) see Meer (2019, pp. 151-154).

If Kant is right, and this procedure is common to all rational sciences, and if we take his position as not a mere fact in the history of philosophy and an outdated theory, but as a research programme and a potentially helpful suggestion to understand the logic of scientific practice, we need a more systematic account of the methodological use of pure reason. Based on the preliminary terminological clarifications in Part (I), I want to answer the question whether there are different "planes" or "levels" in the use of methodological ideas. Are, e.g., the ideas of the whole of jurisprudence or of the universal history with a cosmopolitan purpose embedded into some general structure of science with principles above and below them? Are they boxes inside a bigger box and contain smaller boxes inside them, or are they just sketches on a blank paper? In answering this question, I will think through Kant's holistic account of science, the relation of methodological principles to other kinds of ideas of reason and the possibility of differentiating between grades of growth of knowledge under the guidance of a methodological idea.

There can be no doubt that Kant's inquiry into the nature of science is led by his interest in the possibility of metaphysics and its relation to empirical and historical sciences. It would, however, be a mistake to assume that his systematology is based upon an equation of "science" with "metaphysics" in the sense that the latter (if possible) would be – like in the Cartesian tree metaphor – the roots of all other sciences. Kant's image is rather – as presented in his pre-critical work on the *Universal Natural History and Theory of the Heavens* – the one of the universe containing smaller systems of celestial objects within bigger ones.[10] Science is a "system of systems", (A) a general idea of the whole of human scientific knowledge with (B) a certain sketch or preunderstanding of the relation of its parts, i. e. of sciences.[11] Philosophy, metaphysics (as part of philosophy), *Universal History with a Cosmopolitan Purpose*, jurisprudence etc.

> are not merely each articulated for themselves in accordance with an idea but are rather all in turn purposively united with each other as members of a whole in a system of human cognition, and allow an architectonic to all human knowledge, which at the present time,

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10   In his pre-critical work *Universal Natural History and Theory of the Heavens* (1755) Kant was concerned with what he called the "systematic constitution of the universe" (*NTH*, AA 01, p. 246; Kant, 2015, p. 214) as a work of God, "a great architect" (*cf. NTH*, AA 01, p. 256; Kant, 2015, p. 222). To understand the structure of the universe, Kant was thinking in analogies (*cf. NTH*, AA 01, pp. 253-258; Kant, 2015, pp. 220-223). Just as planets in the Solar System orbit around the Sun, all stars in the Milky Way must in their turn move around their common gravitational centre – and the same applies to the galaxies, the "Milky Ways", themselves. The architectonic ideas are such gravitational centres with systematic knowledge circling around them. While I suggest differentiating between four planes in the suggested metaphor of the universe of science (created, and therefore comprehensible by human reason), Kant, in this text, was however thinking of an overwhelming unimaginable infinite progression of analogically constructed unities (created by God).

11   For interesting remarks on Kant's idea of the whole of the science as a "vague idea" see also McRae (1957). Unfortunately, McRae did not inquire into its concrete structure.

since so much material has already been collected or can be taken from the ruins of collapsed older edifices, would not merely be possible but would not even be very difficult (*KrV*, A 835 / B 863; Kant, 1998, pp. 692-693).

The faculty of principles in its methodological or architectonic use is therefore concerned with the most general, systematic and complete image of scientific knowledge. This is reason's highest and most demanding task in this field. Subsequently, (1) if science is a system of systems, and (2) if a system is a whole of cognitions based on an architectonic principle, and (3) if the highest and complete notion were the idea of the whole of all possible human knowledge, there must be a systematic subdivision of it into smaller systems under ideas of reason. I suggest differentiating between four levels of methodological principles ("ideas within idea" in "system of systems") to get an overview of the functionality of reason in the narrow sense in its architectonic use. The *first* and highest level of representation of scientific systematicity with the above-described relation of archetype / ectype or idea / sketch is *the idea of science as such*. Concepts of sciences like philosophy or jurisprudence are just ideas of systems among other systems or "galaxies" in the universe of science, and are, therefore, on the *second* level of the use of methodological pure reason. In Kant's understanding, philosophy (just as jurisprudence, as cited above) "is a mere idea of a possible science, which is nowhere given *in concreto*, but which one seeks to approach in various ways until the only footpath, much overgrown by sensibility, is discovered, and the hitherto unsuccessful ectype, so far as it has been granted to humans, is made equal to the archetype" (*KrV*, A 838 / B 866; Kant, 1998, p. 694).

Kant's own "sketch" of the idea of philosophy is based on a distinction between pure (cognition from pure reason) and empirical (rational cognition from empirical concepts) philosophy. The former is subdivided into propaedeutic (critique or transcendental philosophy, which is also metaphysics in a wider sense) and metaphysics (see *KrV*, A 841 / B 869; Kant, 1998, p. 696). The idea of metaphysics is, therefore, not to be confounded with the general idea of philosophy. I suggest – to make it clear – allocating all methodological ideas of the parts of sciences (including the parts inside the parts of sciences), i.e. of "stellar groupings" within "galaxies", to the *third* level. On this level we find such archetypes/ectypes as (1) "idea of metaphysics" (*KrV*, A 849 / B 877; Kant, 1998, p. 700), alternatively called "idea of a philosophy of pure reason" (*KrV*, A 847 / B 874; Kant, 1998, p. 699) or idea of a science which is "as old as speculative human reason" (*KrV*, A 842 / B 870; Kant, 1998, p. 696); (2) "idea of transcendental philosophy" (*KrV*, A 01; Kant, 1998, p. 127) behind the *Critique of Pure Reason* which evolves throughout Kant's works;[12] (3) "idea and

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12   For a concise overview of the development of Kant's concept of transcendental philosophy see Förster (2016, pp. 2319-2325).

necessity of a metaphysics of morals" (*MS*, AA 06, p. 214; Kant, 1991, p. 43); (4) the above-mentioned "idea of universal history with a cosmopolitan purpose"; (5) ideas "of a *Right for all nations (ius gentium)*", of "*cosmopolitan Right (ius cosmopoliticum)*", of public law etc. (*MS*, AA 06, p. 311; Kant, 1991, p. 123).

These "stellar groupings" within the "galaxies" of "sciences of reason" can be subdivided into smaller unities (to stay with the metaphor of the universe of science: "planetary systems"). This may be considered as the ground-level of the architectonic use of pure reason. How far does it reach? A system of knowledge is a system of cognitions under a methodological principle of reason ((A) archetype and (B) outline). The *fourth* and final level is reached if ideas which construct a part of a science cannot be subdivided into smaller ones and can be only interconnected in a network. An example for this is the idea of pure thinking. Kant states clearly that the idea of transcendental logic as a part of transcendental philosophy is based upon this concept:

> In the expectation, therefore, that there can perhaps be concepts that may be related to objects a priori, not as pure or sensible intuitions but rather merely as acts of pure thinking, that are thus concepts but of neither empirical nor aesthetic origin, we provisionally formulate the idea of a science of pure understanding and of the pure cognition of reason, by means of which we think objects completely a priori. Such a science, which would determine the origin, the domain, and the objective validity of such cognitions, would have to be called transcendental logic […] (*KrV*, A 57 / B 81; Kant, 1998, p. 196).

The pure thinking as an idea of spontaneous creation of concepts and principles a priori by the faculties of understanding and reason is a fourth-level methodological concept. The transcendental logic is a unity of cognitions related to the functionality of pure thinking – e.g. the procedure and number of inferences of pure reason in the "Transcendental Dialectic". Accordingly, the idea of pure will (of practical freedom, of pure practical reason) is a heuristic key concept behind the *Critique of Practical Reason* and *Metaphysics of Morals*, and is a gravitational centre of corresponding cognitions.

Following these thoughts a little further, I would go so far as to say that all pure concepts of reason we encounter inside and outside Kantian works may be additionally considered as methodological (architectonic) principles under the condition that they are explicitly conceived of as objects of a study (e.g. of a philosopher). I will try to explain this by an example. The transcendental ideal (God, in a merely theoretical perspective) in the *Critique of Pure Reason* is either a dogmatic transcendent concept (if the power of judgement is deluded) or a regulative principle. In the latter case a natural scientist may systematically analyse nature by following the

heuristic idea of the purposiveness of everything – as if it were created by a higher reason. From a mere methodological point of view, e.g. of Kant as a philosopher, the "Ideal of Pure Reason" is a chapter within the "Transcendental Dialectic" and – as a pure concept – an object of study. In this perspective, it expresses a systematic unity of cognitions regarding the inferences and the categories used to think this concept, the mistakes of the power of judgement, the regulative functionality etc. Correspondingly, the idea of beautiful is used by an artist directly and not – e.g. by a philosopher who works in aesthetics to understand this concept – as an object of studies. In the same way, the invisible church is an example for religious concepts of reason, but from the perspective of Kant as a scholar this idea is necessary to analyse possibility of *Religion within the Bounds of Bare Reason*. The ideas of state, state constitution and social contract (often formulated as "idea of the original contract" in Kant) may belong to judicial or political practice, but for a legal scholar or a legal philosopher they are archetypes of unities of knowledge (with competing ectypes).

Following my suggestion to bring order into the Kantian account of architectonic use of pure reason by differentiating between four levels of methodological principles, these could be possible examples of sets of "ideas within idea" and corresponding "systems within system" in the universe of science:

(I) idea of science – (II) idea of philosophy – (III) idea of pure philosophy, idea of metaphysics, idea of transcendental philosophy, idea of transcendental logic – (IV) – idea of pure thinking

(I) idea of science – (II) idea of jurisprudence – (III) idea of public law – (IV) idea of social contract

The universe of science is growing and expanding if progress is made on these four levels. Kant speaks in this regard of a "self-unfolding of reason" (my translation for: "*sich bloß auswickelnden Vernunft*" — *KrV*, A 835 / B 863; *cf.* Kant, 1998, p. 692) (a term that will be later prominently used by Hegel in a different way),[13] Reason in the narrow sense leaps ahead and creates vague heuristic concepts that guide the will and the understanding of a scholar (regardless of whether she is a researcher, lecturer or student). On the one hand, the growth of knowledge in rational sciences is dependent on this function. On the other, there are the successful and unsuccessful attempts to define these concepts and to develop fitting systems of cognition (ectypes) which lead to a clearer conceivability of architectonic ideas. The progress in rational sciences is therefore based on this interplay of archetypes and ectypes, and the history of a science – as Kant

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13   Nuzzo (1995) points out quite rightly that Hegel's concept of the (self-unfolding) idea (also called: absolute idea, reason, reasonability, subject-object etc.) rather has the methodological sense of an ideal of a philosophical system. It is not to be confounded with the transcendental ideal (representation of God). As far as I can see, by differentiating – as the majority of Kant scholars usually do – between only three types of ideas in Kant (transcendental, moral and aesthetical, *cf.* Nuzzo, 1995, p. 97), she does not thematise the architectonic (methodological) ideas and misses this interesting passage at the end of the *Critique of Pure Reason*.

shows by the example of metaphysics in the last chapter of his first *Critique* – is a history of fallen edifices which contributed to a general understanding and evolution of an idea. Hence, it is possible to differentiate between grades in the growth of knowledge in relation to an idea as well as between grades of clarity in the ideas on all four levels. Philosophy, e.g., is an ideal concept of what is yet to be discovered, and third- and fourth-level ideas and systems can still bring a change into this concept. This is the dynamic holistic picture of scientific practice that Kant gives us with his thoughts on the logic of scientific research (in his architectonic methodology).

III

If we want to be something more than a "plaster cast" (*KrV*, A 836 / B 864; Kant, 1998, p. 893) of Kant's mind, we should examine whether the theory of architectonic ideas is still a reliable, helpful and well-grounded position. Ironically, many post-idealistic authors in philosophy in the nineteenth and twentieth centuries, who explicitly claim to have "overcome" the Kantian ("subjective", "outdated" etc.) standpoint, tacitly use their reason in the narrow sense to create their philosophical projects. I will show this using the example of Karl-Otto Apel's *transcendental pragmatism*. Apel and Habermas try to find a way to make use of what Kant calls the "ideas of reason" in contemporary contexts by embedding them into the structures of communicative rationality and everyday life practice and understanding them as "detranscendentalised" idealising presuppositions (see Habermas, 2003, pp. 83-130).[14] This is – just as any philosophical project – *per se* a legitimate and autonomous research programme. But a deeper look at the corresponding texts and passages reveals that both communicative rationalists (1) are aware of only a very limited number of kinds of ideas (see, e.g., the list in Habermas, 2003, p. 87), (2) which may be partially the reason for the poor articulation of their actual functionality (see the point (a) below) as well as (3) for the unnecessary polemics against Kant and ad hoc modifications (see the footnote below). In what follows, I will not be concerned with an in-depth analysis and discussion of Apel's account of ideas or his position in general. My goal is simply to point out some of his shortcuts that undermine the actual power and importance of Kant's set of theories regarding the ideas of reason. One can, of course, try to "detranscendentalise" the architectonic ideas and embed them into the communicative acting and rationality (if one follows the highly problematic thesis that transcendentality excludes communicative acting and if one does not recognise that for Kant scientific practice (e.g. the work on the idea of metaphysics) is a collective enterprise of the community of former, contemporary

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[14] Apel would prefer to speak of a *transformation* of transcendental philosophy in this context (see Apel, 1994a, pp. 235-237).

and future scholars), but one has first to know that there are architectonic ideas, that they are actually used, and understand their concrete functions."

For Apel, to speak of faculties (powers) of understanding and reason is completely redundant and it simply does not fit the contemporary logic of science. The older theoretical models of reason must be replaced – and herein he follows, like Habermas, the pragmatist tradition, Weber, Wittgenstein and Popper – by a general concept of rationality, and primarily: communicative rationality. The concept of transcendentality receives a new, "updated" meaning in this context. The "conditions of a possible experience" are not to be found in the subject and its mind, but in the acts of communication, as rules and presuppositions, imagined and anticipated by every participant in a discourse. Since nobody can in any way avoid or seriously abstract from these rules and presuppositions, regardless of whether she is in a poly-, dia- or monologue, Apel concludes that an ultimate grounding of rationality, ethics and philosophy as such is possible. The authors, however, who work within the paradigm of subjective philosophy of mind and epistemology are – like its initiator Descartes – prone to "abstractive fallacies": they speak of a "transcendental apperception" (Kant) or of a "self-positing of the I" (Fichte) disregarding the processes and rules of communicative acting.

I want to argue that by abandoning and transforming the "older transcendental philosophy of mind"[15] (Apel, 1988, p. 112, transl. M L), especially Kant's theory of reason, Apel, in turn, loses possibilities and an apparatus to understand and explain – i.e. to become more conscious of – his own actions as a philosopher. Apel uses, without giving a proper account of it, (a) fourth- and (b) third-level architectonic ideas, a procedure that is not fully explicable by the transcendental pragmatism and that still requires the theoretical framework of the Kantian transcendental philosophy of mind to be understood.

(a) First, consider the concept of an *ideal communication community*, which is one of the most central terms in Apel's philosophical project. According to Apel, the *ideal communication community* is something that is always imagined and anticipated by every discourse participant. It is an ideal add-on to the real communication community. In all our argumentative communicative acts, even in a monologue, we must assume *responsible* and *equal* discourse partners who are principally *able to reach consensus* (*cf.* Apel, 1996, pp. 47-51, 235-236). The ultimate grounding of rationality, ethics and philosophy is possible because of the uncircumventability of the conditions of communication, and this includes the anticipation of an ideal communication community. Interestingly, this concept has, as Apel understands his own position, a status similar to the "regulative idea" in the *Critique of Pure Reason*. He states, the notion of ideal communication

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15   "[...] *älteren Transzendentalphilosophie des Bewusstseins.*"

community has "the character of a 'regulative idea', – to which, as Kant says, – 'nothing congruent can be given in the senses'"[16] (Apel, 1988, p. 101, transl. M L, *cf.* Apel, 1996, pp. 236-237). Apel does not, however, go as deeply into this topic as Kant scholars would wish him to do, and his insufficient analysis leads to at least two shortcuts: *Firstly*, Apel does not distinguish between practical and transcendental ideas and the corresponding functions of pure reason. The definition of ideas to which he refers is, as mentioned above, restricted to theoretical philosophy. But as Kant already puts it at the beginning of the transcendental dialectic: there is a difference between (1) something of which I can say "it is *only* an idea" (*KrV*, A 328 / B 384; Kant, 1998, p. 402) and (2) an idea as an indispensable condition for practical use of reason. Transcendental concepts of reason are indeed *only ideas*, insofar as we can, e.g., *think* of an infinite universe, but are incapable of *imagining* the absolute whole of all appearances in all its details. This is different from simple practical ideas. To act wisely, we must create a concept of wisdom. A wise decision is a decision made in accord with the idea of wisdom (see *KrV*, A 569 / B 597; Kant, 1998, p. 552). In the case of the practical use of our reason we can partially demonstrate the reality of a concept in our imperatives and real actions. The ideal communication community is therefore not a mere idea, but something which can be to some extent given *in concreto*, namely in the real communication community. Every participant in an argumentative discourse must presuppose and anticipate equal and reasonable conversation partners, and functioning philosophical or political debates demonstrate that this is not a mere idea. Thus, by not distinguishing different types of ideas, Apel misses the chance to recognise the actual potential of the Kantian theory of reason in the narrow sense and to get a broader understanding of the logic and the status of practically indispensable ideal presuppositions.[17] *Secondly*, he does not reflect on the methodological function of the concept of the ideal communication community. This involves answering the question, which can be considered to be of a metaphilosophical or metatheoretical nature: What am I doing when I am introducing, explaining and putting forward a concept of reason? Two perspectives must be distinguished, the one of a rational agent, who bases his imperatives and actions on the idea of the ideal communication community, and this is also Apel himself communicating with his present and future readers in his works, and the one of an author (philosopher) who is creating and describing this idea in terms of his research. In the first case one can speak of a practical use of pure reason, in the second of a methodological use. The main purpose of the latter is not to act practically in accordance with an idea, but to produce scientific knowledge in relation to or resulting from it, i.e.

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16   "[...] *den Charakter einer 'regulativen Idee', der – nach Kant – 'nichts Empirisches völlig korrespondieren kann'.*"

17   Apel (1988, pp. 69-102) does instead seek for a way to combine the Kantian concept of the ideas (which are in his view *all* regulative and not given *in concreto*) with the Hegelian notion of reason given in the actuality.

to combine cognitions and arguments into a system under one or more (correlated) central pure concepts.

(b) Hence, Apel is using (without realising it) his practical and methodological functions of pure reason within his project on the fourth level which are described in detail in the "older transcendental philosophy of mind" (Apel, 1988, p. 112). Moreover, the *ideas of transcendental pragmatism* and *discourse ethics* as parts of philosophy represent third-level architectonic principles. They both are archetypes of systems of knowledge pictured by their author at the outset. Each of these ideas, as Kant puts it, "lies in reason like a seed, all of whose parts still lie very involuted and are hardly recognizable even under microscopic observation" (*KrV*, A 834 / B 862; Kant, 1998, p. 692). Apel's major works and published lectures are ectypes – efforts to impart his discoveries and cognitions based on fundamental ideas of research projects and positions (which are not yet, or only partially, given in experience).

Conclusion

The architectonic methodology is an important theory, not only regarding Kant as a historical person, but also in its own right, concerning its purposive content. It provides us with an apparatus to understand the logic of scientific practice in rational sciences, which can be developed further in contemporary contexts. As shown in the first section of this paper, Kant's account of architectonic ideas is a part of his general inquiry into the nature of pure reason, which, being a mental faculty, is responsible for pure representations that serve as presuppositions, leaps ahead, demanding tasks for our will and our understanding. Their genuine methodological function that he describes in terms of an archetype-ectype-relation is the constructive conceptualisation of science as such, of rational sciences, their parts and certain basic ideas for the sake of planning, developing, acquiring and ordering of systematic knowledge. The further analysis in the second section has shown that it is possible to distinguish four planes of the continuously growing and expanding "universe of science" represented by architectonic ideas in Kant: (I) science as such as a systematic unity of all human knowledge; (II) the specific rational sciences, such as philosophy or jurisprudence; (III) the parts and directions within these sciences, such as ethics, metaphysics, transcendental philosophy, public law; (IV) all the different "ground-level" ideas like the invisible church, pure thinking or the social contract when they are explicitly considered as objects of studies. Finally, as pointed out, the postmodern critique or transformation of Kant's concept of reason and the insistence on the necessity of abandoning the older epistemological research programmes may lead to a loss of

important knowledge.[18] Karl-Otto Apel's action as a philosophical author would not be possible without the methodological dimension of use of pure reason; it is without the ideas of discourse ethics, transcendental pragmatics and ideal communication community that represent third- and fourth-level architectonic ideas.

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18   Apel (1994b) rather insists on the necessity of a paradigmatic change (in Kuhn's sense, but applied to philosophy) instead of (and I personally would prefer this position) letting different research programmes co-exist and complement (or compete with) one another at the same time. His critique must be seen in the light of this general metaphilosophical presupposition.

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