

On Goethe's Imagination and Kant's Intuitive Understanding

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1. Introduction

Science and art have the same roots. This idea is not common. It is often thought that science considers art as an illogical product of fantasy and that, vice versa, art views science as an ascetic restriction of reason and understanding. These views have simple premises; science consists in reason and art in imagination. However, they do not seem to be specifically different to one another. That is, the sense of completeness when touching a finished work of art, and the vague feeling when a new idea in a scientific theory emerges, do not differ so much in structure and they contain the same dynamism of creation.

Goethe observes this dynamism and treats the science and art equally and integrally. But how is the unity of science and art possible and what precisely is this dynamism of creation? Taking these questions into consideration, the present article aims at elucidating particulars of Goethe's scientific methodology. In order to clarify these points, first Goethe's concept of nature will be illustrated. Secondly, Goethe's *a priori* will be explained by comparing his approach to Immanuel Kant's theories on *judgment*.

2. Nature and art

What we see in nature, is power, which devours power. Nothing is present. Everything is transitory. Thousands of seeds are trampled. Thousands are born every moment. Great and meaningful, divers into the infinity; beautiful and ugly, good and evil, everything exists side by side with the same right. And the *art* is just the counterplay [Widerspiel]; it springs from the effort of individual to protect oneself against the destroying power. (Goethe, WA I, 37:210)

Goethe expresses these sentences in his review of Johann Georg Sulzer's book *General Theory of Fine Arts* (*Allgemeine Theorie der Schönen Künste*) in the journal *Frankfurter Gelehrte Anzeigen* on 18 December 1772. This review can be considered one of the earliest descriptions of Goethe's concept of nature. At the age of 23, young Goethe shows a strong repulsion against the "general" theory of arts as described by the mathematician Sulzer. Sulzer's abstract theory appears to Goethe to be exceedingly rigid regarding the fine arts, whose beauty is entirely lively just like nature herself. Sulzer tries to cover art and nature with his general theory, but Goethe strives to uncover the veil of generality and observe nature and art openly and overtly. He believes that there is a tremendous power in nature which destroys every living entity and then recreates itself again in an endless circle.

Goethe states that art is the repulsion to such a turbulent nature, springing from the individual's endeavours to preserve him- or herself against this force. He will maintain this concept of nature his entire life.

Goethe contrasts art with nature and defines them as the two elements of an opposing “counterplay [Widerspiel].” This juxtaposition is not particularly new, but rather basic or classic. In ancient Greece, Aristotle juxtaposed “*technē* [τέχνη]” with “*physis* [φύσις].” By *physis* he means entities that are generated and developed within themselves. Contrary to *physis*, *technē* owes its cause to something or someone other than itself. *Physis* grows autonomically, but *technē* is made by an artist or creator. According to Aristotle, human activities are composed of *technē*, “*prāxis* [πρᾶξις]” and “*theōria* [θεωρία].”¹ The concept of *technē* substantiates “*poiēsis* [ποίησις]” (production, creation or making). *Poiēsis* includes poetry and rhetoric as its subclass and illustrates an artistic activity.² Goethe conceives *poiēsis* as an important root of scientific knowledge and illustrates it as an elemental aspect of ancient Greek culture.

Goethe, who is one of the main figures of Weimar Classicism, tries to re-establish the ancient affinity of science and art—or *theōria* and *poiēsis*—in his period. He interprets art and science as entities that are not separated in ancient Greek culture, and accordingly evaluates the Greek attitude toward art and science in the historical section of his *Theory of Colours*. Here he writes: “The Greeks, who came over from the regions of poetry for their observations of nature, still retained poetic qualities” (Goethe, WA II, 3:109). As mentioned above, poetry is one of the representative subdivisions of *poiēsis*. According to Goethe, the Greek treated nature based on their understanding of *poiēsis*. This juxtaposition of *physis* and *poiēsis* was also described in Goethe’s early perception of nature as a devouring power that is in constant counterplay with art. Goethe furthermore describes the relation between natural science and art in the history section of his *Theory of Colours*:

Returning now to the comparison of art and science, we encounter the following consideration: since in knowledge as well as in reflection, no Totality can be brought together, because one [art] lacks the inside and one [science] lacks the outside, then we must necessarily think science as art, if we expect some kind of wholeness. And we do not have to look for them in the general or the Exuberant, but just as art always presents itself completely in every single art work, so should science also prove itself every time completely in every single treated object.

But to approach such a demand, one ought not to exclude any kind of human power in scientific activity. The abysses of prediction, a reliable intuition of the present, mathematical depth, physical accuracy, height of reason, sharpness of understanding, agile longing imagination, affectionate joy in sensuality, nothing can be dispensed of for the lively, fruitful grasping of the moment, through which a work of art alone, whatever its content would be, can be created by itself (Goethe, WA II, 3:120)

The artist wishes his work to be complete in every aspect. He or she forms it in harmony with the components and milieus of his or her environment. The scientist, however, tries to prove the validity of a theory in a specific research area on a certain condition. It is this restriction or rigorousness that makes science exact. Art, on the one hand, lacks solid content through exact investigation, while science, on the other hand, lacks harmony or totality. Goethe claims that if science should reach totality or integrity, it must be considered as art. He thus considers the unification of science with art

in the same way as the ancient Greeks.

Since Goethe treats art and science integrally, his natural science inevitably adopts the character of *poiēsis*. This view on science is representatively illustrated in Goethe's *Theory of Colours*. In fact, his investigation of colours begins from his scrutiny of paintings, which indicates that his theory mainly focuses on the poetic creation of colours. Goethe describes the juxtaposition of nature's tremendous power with her antagonist, i.e. the individual. The individual, caught up in this "counterplay," can only defend him- or herself from nature through the counterpower of *poiēsis*, i.e. art and science.

3. Unclear definition of the archetypal phenomenon

The quintessence of Goethe's theory of colours lies in the archetypal phenomenon (Urphänomen), through which the diverse developments or metamorphoses of colours can be comprehended. The archetype of colours is composed of three elements: light, darkness and semi-transparent media. Goethe's theory of colours is often considered as a theory of the mixture of white and black (light and darkness). Aristotle already described the theory of mixture, and numerous variations followed this peripatetic theory. Goethe's theory also defines light and darkness as central elements of his theory of colours, but this does not justify the rash reasoning that Goethe's theory was nothing but a variation of the Aristotelian theory of colours—an opinion that is frequently encountered.

Light and darkness are key materials in peripatetic theories. Descartes, who stands in the tradition of Aristotle, explains light and darkness by quality of ether, which is made of infinite divisible particles. Light transmits through the ether and brings it into a certain state of movement. This movement appears as the phenomenon of colours. Goethe, however, does not always consider light and darkness as materials but as activities, and that therefore colours are the products of the actions of light and darkness. Hence Goethe's theory of colours focuses on the dynamic action of light and darkness.

Goethe mentions the light as one of the main elements of his theory of colours. But he does not define exactly what the light is. Neither are darkness nor semi-transparent media defined precisely. However, it is possible to deduct what the semi-transparent media concretely are: in the eye they appear in physiological colours, in the prism in physical colours, on the surface of minerals and living beings in chemical colours, in emotion in cultural colours etc. In addition, appearances of colours become different in accordance with states of materials, i.e. if they are solid, liquid or vaporous, and colours may furthermore change if immaterial elements such as emotions or dreams are included into this enumeration. Possible semi-transparent media can be extended in diverse forms of simple objective surfaces to higher-order cognitive functions such as dreams. This diversity of media gives an entangled impression, because Goethe only offers an unclear definition of semi-transparent media: in general, all things that make colours possible can be counted as semi-transparent media. It goes without saying that this is no proper definition of the elements of colours.

Although the nature of light was the focal point of colour theories and optics at that time, Goethe does not define the disposition of light either. Nor does he incorporate any contemporary scientific findings such as the particle theory of light, the wave theory of light, or the corpuscular theory of light etc. into his own theory of colours. Goethe explains this circumstance on the definition of light in the first line of the preface to his *Theory of Colours*:

Whether or not, when speaking of colours, one should mention above all things the light, is a quite natural question, but we can only reply briefly and honestly: since already so much has been said of the light it seems questionable to repeat or to multiply what has already been said. (Goethe, WA II, 1:9)

He continues:

For we actually undertake in vain to express the essence of a thing. We become aware of effects, and a complete history of these effects at most encompassed the essence of that thing. In vain do we strive to portray the character of a person; one should on the contrary put together his behaviours and then a picture of the character will come up to us.

The colours are actions of light, actions and sufferings [Taten und Leiden]. (Goethe, WA II, 1:9)

From these quotes it seems that Goethe avoids the definition of light, or that he tries to tell us that such a definition is a futile effort. He appeals to his readers that one should inquire into actions of light rather than into the nature of light. This he illustrates by simply stating that colours are actions of light.

Even though these explanations about the essence of light still have an unclear and negative ring to themselves, Goethe formulates these passages very carefully. His refusal to define the light, which is manifested in the first section of his *Theory of Colours*, can be considered a result of the discussions with Friedrich Schiller. On 16 February 1798, Schiller asks Goethe about the nature of light or the epistemological disposition of light:

Is colour merely an accidens of light, and therefore nothing of substance?

Is colour merely an effect of light?

Is it the product of an interaction between light and one of its similar substantial agents = x? (Because in the category of the relation everything is only taken relatively, then light is identified by the above question with a substance, therefore the question is: is the colour truly just an accidens, relative to the light, or is it something on its own?³)

Schiller continues to pose short and blunt questions based on Kant's epistemology. Kant illustrated four categories of human understanding and Schiller depicts one of four categories: quantity, quality, relation and modality. Schiller asks whether the connection between light and colours can be understood as the relation of epistemological categories. His questions correspond to the three subclasses of the category of the relation: the relation between accident and substance, the relation of causation, the relation of interaction. He therefore asks: "Is light the substance and colours are his accidens? Is relation between light and colours causal or interactional?" Schiller's questions are thus directed at the categorisation of light and colours.

Goethe does not answer Schiller's questions directly. He writes in his reply on 17 February 1798 that Schiller's questions are only issues of history. But Goethe leaves a roughly written note which he neither sent to Schiller nor published anywhere:

Light

Seemingly the need to speak [about it]

Cannot say more than everyone else could say

Question whether it is material or immaterial

Substance or acc[idents] etc.

Pointless. He who does not admit getting exhausted when trying to solve it

From every [...] [betrayed?] we only learn from them

Effect clear

The effect of light lies before us⁴ (Goethe, WA II, 5ii:441)

In this note, Goethe describes that it is not necessary to ask the question of category of relation. To him, categorisation of light is pointless. Instead he demands the investigation of the phenomena of colours that simply appear before of us. Goethe does not address Schiller's questioning squarely. In fact, Schiller's question points out the essential problem of Goethe's natural science and thus hits the crux of the matter.

4. Categorisation of the archetypes

It is not the first time for Schiller to address epistemological questions to Goethe. They were already discussed at a meeting of a society of natural science in Jena in September 1794. It is often pointed out that this meeting exerted fundamental significance on Goethe's acquaintance with Schiller: it was here that their friendship that would last for eleven years until Schiller's untimely death began. Goethe summarised this meeting in the article *Fortunate Event (Glückliches Ereignis)* and published it in 1817 in the first issue of the first volume of his journal *On the Natural Science in General (Zur Naturwissenschaft überhaupt)*.⁵ In this article, Goethe recalls his conversation with Schiller: after the meeting of the society, Goethe went out and met Schiller outside by chance. They began a discussion about the study of nature. Goethe spoke at length and with enthusiasm about his reflections on the archetypal plant (Urpflanze):

We arrived at his house, the conversation enticed me into it; there I vividly presented the metamorphosis of the plants and, with some characteristic outlines, figured a symbolic plant before his eyes. He heard and saw it all with great interest, with decisive comprehension; but when I finished, he shook his head and said: "That's not experience, that is an idea." I became confused, irritated to a certain extent; for the point that separates us was thereby most strictly depicted. (Goethe, WA II, 11:17)

For Schiller, the archetypal plant represents a concept of reason that does not stem from experience. In his opinion, the archetypal plant that Goethe recognises in all his observations of plants does not exist at all. Schiller states that this archetype is in fact no object of observation. For him, who was familiar with the Kantian epistemology, this primordial form of plants merely contains a *notio* of understanding. Goethe's statements and drawings in this regard appear to Schiller as a naive fantasy, as a chimerical product of a mixture of daydream and reality. Thus, the archetypal plant or phenomenon does not represent an empirical object of knowledge for him and consequently forms a

mere “semblance of pure reason [Schein der reinen Vernunft].” Goethe responds to Schiller’s unexpected interpretation: “It is quite a happy circumstance for me to have ideas without knowing it, and that I even see them with my own eyes” (Goethe, WA II, 11:17). With this attitude, however, Goethe can hardly defend himself against Schiller. At first, Goethe seems to accept the strict class difference between idea and experience which Schiller points out. However, it is not clear whether Goethe, after this conversation with Schiller, completely withdraws his claim to the existence of the archetypal plant or phenomenon as a *concrete universal*.

There are many interpretations of Goethe’s scientific research on this matter, namely on the question where the epistemological dimension of his science’s main concept is located. The entire systematisation of Goethe’s study depends on this problem, as does the question of whether the archetypal form of plants or colours can only be defined subjectively or universally.

In this context, Ernst Cassirer argues that Goethe renounces the archetypal plant as an idea and simultaneously as an immediate and universal object of intuition:

The illusion of seeing the archetypal plant with eyes has been renounced by Goethe once and for all, since Schiller taught him about the difference between idea and experience. He now conceives of it as a ‘model’ that does not exist in nature, but which nevertheless illuminates and makes transparent the peculiar inner structure of existing matter as well as the interrelationships that take place between all its individual parts.⁶

According to Cassirer, Schiller convinced Goethe that the archetypal plant is a mere illusion and may no longer claim any space in experience. Cassirer then interprets that the archetypal plant is quasi a “model” outside of nature that expands the capacity and performance of the thought.

Cassirer continues:

Rather, the archetypal plant is at the same time both principle and structure—it is a rule that develops from and is represented by intuition itself. It is an instruction to remain in the finite and yet to expand into the infinite, so that we pass safely through all directions with its help. In order to not only grasp this unity of the universal and the particular, but also to be constantly certain of it, to stand place by place within this relationship, we do not need any modification of the problem, nor any transfer of it to another sphere of thought, as physics does by transforming qualities into quantities. In front of the researcher’s synthetic eye, existing matter forms itself to life sequences that constantly interlink and rise higher and higher—without this form of sequence requiring a detour via the analytical way of thinking of numbers.⁷

In Cassirer’s view, the archetypal plant is a principle or a structure that is developed from intuition. In all of Goethe’s writings on natural science, the archetypal plant or phenomenon does not require a quantitative representation. That is, while quantity deals with extensive size, the qualitative principle covers nature from the viewpoint of the object itself. The measure of quality consists in the intensive size, which is not decomposed into a homogeneous unit of countable measurement. For example, the impression of red cannot be compared to that of yellow. The two colours contain different intensive sizes. For this reason, colour is often treated as a quality in the history of philosophy.

John Locke, for example, denominates the property of the material object as the primary quality and mentions five components: extension, figure, motion or rest, number, solidity. He further adds as a secondary quality the sensually perceptible moments of objects like colours, sounds, tastes.⁸ Cassirer considers the objects of Goethe's natural science from this traditional view of philosophy: the growing plant as the primary quality and colour as the secondary quality.

Cassirer also adds an immediacy between the archetypal and the individual plant, because both the archetypal plant and the general form of any other individual plant exist in this quality and do not undergo an intercategory process. Because of this immediacy between the archetypal plant and the individual plant, Goethe's method of morphology falls into the category of quality whereas the archetypal plant can be regarded as a certain intuitive structure. Cassirer understands this abstraction of individual phenomena in favour of an archetypal phenomenon within the same category as immediacy and describes it as something that develops from intuition.

Although intuition is in fact characterised by directness, intuition itself cannot directly grasp the archetypal plant at all. Abstract thinking is necessary in the structuring of the archetypal plant, because sensuality can only proceed receptively and cannot process or abstract any sensory data. The understanding abstracts the perceptions about plants or colours and systematises them. It can be argued that this structure itself is not an object of perception, but that it contains a certain directness because it never enters another category. The Goethean archetypal concept—the archetypal plant or phenomenon—therefore does not come from intuition, but from the understanding that generalises sensual perceptions. Because the archetypal plant, as a concept of understanding, does not transcend the realm of quality and is always treated as a certain intensive size, it appears as if it represents an intuitive and concrete structure of perception. Goethe's claim of the archetypal plant is thus, according to Cassirer, an illusion: Although it is perceived by sensuality just like any other processes of cognition and falls into the categories, it always remains within the category of quality. According to Goethe's view of the archetypal plant as a pure phenomenon, it is because of this quasi directness that it appears within the category of quality. The pure representation within the qualitative concept illustrates a model, and the archetypal plant is to be regarded as a model *per se*.

Cassirer's interpretation shows a representative pattern within the study of Goethe, which regards Goethe's natural science as a qualitative one, and compared to modern science even as a quantitative one. Cassirer's interpretation can be seen as a variation of Schiller's ideas. Schiller's questions as to whether Goethe's archetype is to be regarded as phenomenal or transcendental, or as intuitive or conceptual and further as accidental or substantial, aptly reveal the epistemological aspect of Goethe's natural science. Schiller chooses the category of relation and Cassirer the category of quality. Although both refer to different categories, there is no distinction that their interpretations cohere to the categorisation within the framework of Kantian epistemology of understanding.

It does indeed seem that Goethe cannot defend himself against Schiller's objection to the naive mixture of idea and experience, and he thus seems to simply accept this fact. It is therefore a natural conclusion that he accepts Schiller's criticism as correct and changes his mind as well as the content of the archetypal concept accordingly. While one notices Goethe's indecisiveness regarding the ontological and epistemological nature of the archetypal concept in his natural sciences, he does not, as can be seen from the term "archetypal phenomenon," revoke it as an intuitively perceptible universality or an ideal phenomenon. However, despite Schiller's understandable criticism, Goethe continues to use expressions such as "archetypal phenomenon" or "archetypal plant," which implies

the mixture of idea and phenomenon. It is still open to question how Goethe himself thinks about the epistemological status of the archetypes, and whether Schiller's and other followers' interpretations meet the essence of Goethe's archetypal concept.

5. "Knowledge a priori"

About four years after Schiller's first criticism of Goethe's mixture of idea and experience, Schiller again poses the question of the category of the relation between light and darkness in 1798. This time he asks Goethe even more precisely whether the categorisation of the archetypal phenomenon is at all possible. Through this sequential questioning, Schiller inquires about the involvement of understanding in the archetype. In Schiller's view, the archetypal plant and phenomenon are products of understanding, namely pure concepts of understanding. Cassirer basically poses a question similar to Schiller's, namely whether the archetypal plant can only be researched under the category of quality and whether it is to be located in the region of understanding.

Goethe, as seen above, avoids a simple application of fixed categories to his scientific research and leaves the difference between idea and experience open. Before his encounter with Schiller he had already read texts by Kant, and he understood Kant's epistemology as well as the discussion about the categories to which Schiller refers. However, Goethe does not change his scientific procedure in the Kantian way and insists on his own method.

About ten years after Schiller's death, Goethe expresses his perception of Kant's epistemology and tries to answer Schiller's question. Among the essays that Goethe wrote on the topic of epistemology, one of the most significant texts is entitled *Intuitive Judgment* (*Anschauende Urteilskraft*). This essay was written in 1817 and published in 1820 in the second issue of the first volume of his journal *On the Natural Science in General*. Based on the title of this essay it is easy to assume that Goethe developed his method of intuitive knowledge, i.e. the method of his natural science, in connection with the Kantian epistemology.

This essay is to be interpreted in parallel with another publication contained in the same issue of the same journal, entitled *Influence of the Newer Philosophy* (*Einwirkung der neuern Philosophie*). In Goethe's diary this essay is dated 8 September 1817 under the title "Influence" (*Einwirkung*). The entries on intuitive Judgment are found on the following day and the day after the next.⁹ These two texts were written at the same time and are probably closely connected. The content of *Influence of the Newer Philosophy* also mainly refers to Kant and shows how Kant's first and second *Critiques* influenced Goethe, and how Goethe finally judged the modern philosophy.

In *Influence of the Newer Philosophy*, Goethe points out how much he appreciates Kant's remarks about the knowledge a priori:

... and applauded all friends who claimed with Kant: although all our knowledge begins with experience, not all of it comes from experience. I also approve the knowledge [Erkenntnis] a priori, just as I approve the synthetic judgments a priori ...¹⁰ (Goethe, WA II, 11:48)

As is well known, Kant proposes the "synthetic Judgment a priori" as the decisive term for establishing metaphysics or philosophy as a science. This Judgment is conditioned by two attributes: "synthetic" and "a priori."

The “a priori” is characterised as an epistemological principle and contains an antecedent property of knowledge in judgment.

It is thus at least one of these questions that still needs a closer examination and that may not be disposed of rashly at first glance: whether there is such a cognition that is independent of experience and even of all impressions of the senses. Such cognition is called *a priori*, and is distinguished from the empirical cognition that has its sources *a posteriori*, namely in experience. (Kant, KrV, B, 2)

“A priori” knowledge precedes all experience and does not depend on it. For example, the formal laws of arithmetic and geometry in general are valid for everyone and do not depend on any empirical content. Therefore, these laws obviously precede all experience, and this is therefore called “*a priori*.” In Kant’s view, the discussion about the apriority, or innate ideas, is always conducted in the context of viewing it as a gift of God, similar to René Descartes’ “*ideae innatae*” or in Leibniz’s consideration of the “a priori.” In their view, human cognition is implanted by God and the reason for the apriority is originally in God. Kant rejects this view of innate ideas bestowed by God and advocates the thesis of an “original acquisition [ursprüngliche Erwerbung]”¹¹ of human cognitive faculty, especially in his treatise *On a Discovery According to Which Any New Critique of Pure Reason Has Been Made Superfluous by an Earlier One* (1790):

Critique does not simply permit any created or innate representation; all together, they may belong to intuition or to concepts of understanding, but it assumes them as acquired. But there is also an original acquisition (as the teachers of natural law express themselves), consequently also of that which did not yet exist at all before, or to which nothing belonged prior to this act. The same is, as the Critique asserts, first of all the form of things in space and time, and secondly the synthetic unity of manifold concepts; for neither of these takes our cognitive faculty from the objects, as something given in the objects themselves, but brings them a priori into being out of itself. (Kant, ŨE, AA 08: 221)

This essay was written as a defence against Johann August Eberhard, who was schooled in the tradition of the philosophy of Leibniz and Christian Wolff. He criticised Kant for the reason that his philosophy was merely a repetition of Leibniz’s thought. Kant defended himself and emphasised that his critical philosophy did not contain any mystical source of knowledge as Leibniz’ had held, and that he instead exposed another source which could be derived rationally, namely the “original acquisition.” Kant here mentions natural law as an example of this acquisition.

Kant considers the original acquisition of natural law against the background of the French Revolution. Freedom and the right to property are not founded on the divine right of kings, but rather these rights consist solely in human existence and are therefore originally acquired. Under the influence of the European revolutions, Kant tries to define a rational reason for acquisition and applies this discussion as an example or analogy to his theory of the cognitive faculty. The term “a priori” implies the concept of original acquisition as a natural right, i.e. it is not justified by any external subject such as God or a feudal ruler, but by human existence per se. Cognitive faculties such as intuition or understanding are therefore not implanted as Leibniz described, but they are already

acquired from themselves. The “a priori” is treated as the ground of the natural constitution of human faculty and shows itself to be an inviolable ground.

Goethe considers his archetypal plant or phenomenon as a knowledge a priori. The concept of the archetypal phenomenon or plant is in fact knowledge a priori. This concept makes it possible to comprehend the diversity and development of plants and colours. The synthetic Judgment a priori justifies the rational procedure of human understanding. Although the archetypal phenomenon and synthetic Judgment a priori describe themselves as the original acquisition, they differ from each other according to the respective approach of investigation. From this difference it can further be concluded that the content of their concepts of apriority also differ. In the Kantian argument, the “a priori” reveals a basis of the original acquisition in relation to the rational procedure or simply to understanding. However, it is not clear if the Goethean apriority exclusively refers to understanding as well. Goethe approves the intuition and in *Intuitive Judgment* he does not consider understanding itself but rather the “intuitive understanding.” Goethe’s *a priori* therefore indicates a source of the original acquisition of the intuitive understanding. The question is now directed at what this Goethean apriority consists of.

6. “Intellectus archetypes”

If Goethe praises the knowledge a priori and tries to add another source of cognition of experience or simply of intuition, it follows, according to Schiller, that he is already acknowledging something non-intuition in the archetypal phenomenon. Schiller’s discussion aims at the obscure nature of the archetypal phenomenon, and he pressurises Goethe to elucidate the key concepts of his natural science and his methodology. Goethe reconsiders now that the “intellectus archetypes,” which Kant mentions in his *Critique of Judgment*, alludes to a possibility of the intuitive concept.

As Schiller already pointed out, an intuitive perception of ideas is defined in the Kantian philosophy as an impossible procedure, but in Goethe’s opinion, Kant also hints at another possibility of cognition in the third *Critique*: According to Kant, human knowledge is either intuitive or conceptual, and conceptual knowledge is either empirical or pure. The pure concept originates exclusively in understanding, and the aggregation of these concepts is called “idea.” The idea is therefore not an actual object of intuition and only the individual phenomenon is seen through sensuality. Since Goethe had already read Kant’s publications and understood Schiller’s assertion well, he hesitated to reveal the epistemological properties of the archetypal phenomenon, although this phenomenon is the guiding concept of his theory of colours. In this situation, Kant’s hint at the possibility of another higher cognitive faculty became an extraordinary discovery for Goethe. Goethe thus quotes Kant’s respective suggestion of his *Critique of Judgment*, as if he were seeking confirmation in it:

“We can think of an understanding which, because it is not discursive like ours, but intuitive, goes from the synthetic general, the intuition of a whole as such, to the specific, that is, from the whole to the parts. —Here it is not at all necessary to prove that such an intellectus archetypus is possible, but only that in our opposition to our discursive understanding (intellectus ectypus), an understanding that requires images, as well as in the fortuity of such a nature, are lead to the idea of an intellectus archetypus, that does not contain any contradiction.” (Goethe, WA II, 11:55)

Goethe here shortens a quote by Kant that is found in the section “On the peculiarity of the human understanding, which enables us to comprehend the concept of a natural purpose” in the second part of the *Critique of Judgment*. Goethe extracts a passage about the conceptual difference between “intuitive,” “discursive” and “synthetic-general” (Kant, KU, AA 05: 407) and combines it with another passage about the “intellectus archetypes” (Kant, KU, AA 05: 408) one page later. It is clear from the title of this section that Kant discusses the nature of understanding. In terms of content, he describes that a certain understanding can be intuitive in the teleological investigation of the organism and that its process runs from a synthetic general to the particular. Kant calls this understanding “intellectus archetypes.”

The knowledge of understanding is described by the term “discursive,” and the sensual perception by the term “intuitive.” These two faculties and their qualities are sharply separated and mutually exclusive. The two abilities also differ in their origin. For this reason, Kant draws a strict line between understanding and intuition. The unity of intuition with discursive understanding is thus, as Schiller explains to Goethe, impossible in human cognition and only an absolute being like God is capable of these faculties.

Only God can intuitively recognise a concept. God does not have to discursively contemplate any concept, because he is omnipotent and able to directly recognise any object at any time without a medium. Therefore, he simply looks at everything and does not need a process of thinking to understand what he sees. He just draws upon the faculty of intuitive cognition. This intuition of the almighty God can grasp the intellectual concept “noumenon”¹² without deviation. This form of grasping is called the “intellectual intuition” or “archetype” in the tradition of philosophy.¹³

While Kant strictly limits the capacities of human cognition, he nevertheless allows a passing to the “semblance of reason.” Although the human faculty can intuitively perceive sensual objects, it cannot know concepts of reason by intuition, but can only think discursively with the understanding. Kant, however, describes in the above quotation that such a divine faculty is nevertheless possible and that no proof is necessary for this. Goethe expresses this insight about Kant as “highly significant” (Goethe, WA II, 11:54).

7. Intuitive understanding

Why does Kant allow the possibility of an intellectual understanding? The argument of this understanding contains the risk of rejecting the previous achievement of the *Critique of Pure Reason*. Kant explains this cognitive faculty in the context of the organism in teleology, from which follows the question of the relationship of the special understanding to the organism. He explains the nature of the organism as follows:

An organised being is thus not merely a machine, for a machine only has motive power, but it possesses a formative power within itself, namely a force that it communicates to matter that it does not have (it organises), i.e. it possesses a self-propagating formative power that cannot be explained by faculty of motion alone (the mechanism). (Kant, KU, AA 05: 374)

Shortly prior to this quote, Kant mentions the clock that moves by means of the mechanistic force of the gear as an example of a mechanism. In contrast to this, organised beings such as animals or plants

do not only consist in kinetics, but also in “formative drive [Bildungstrieb],” which Johann Friedrich Blumenbach already addressed. Plants grow from the cotyledon to the tree, develop individually in ontogenesis, produce fruits and seeds and reproduce their offspring in phylogeny.

According to Kant, a new way of thinking is required for the study of these organic beings due to their different causalities. In the clock, the relationship between cause and effect is mechanical. The event from cause to effect unfolds unilaterally and linearly. But the causality of the organism does not function as simply as the clock: it is not one-sided but reciprocal, for example in the way that two neighbouring organs influence each other and in each case the effect also flows back to itself. This form of causality allows for the *causa sui*. Kant introduces a concept of purpose that normally ought to be separated from modern natural science:

In such a product of nature, each part is considered as if it exists only through all the others, thus as if existing only for the sake of the others and on account of the whole, i.e. as a tool (organ): which is not enough (for it could also be a tool of art and thus only be represented as a purpose at all possible); but as an organ producing the other parts (consequently each one reciprocally producing the others), and such organ cannot be a tool of art, but only of nature which supplies all material for tools (even those of art): and only then and therefore such a product, as an organised and self-organising being, can be called a natural purpose [Naturzweck]. (Kant, KU, AA 05: 374)

Kant, however, here makes an additional claim to explain the organic being, because the mechanistic causality does not render it completely understandable. The organism is not originally produced and put into operation by any rational being, but rather produced in all its parts by itself. Instead of an external designer, therefore, it is left with nothing else but a “natural purpose,” i.e. a self-cause. If animals and plants maintain their totality and create themselves only by means of their own activity, some inner principle of their purposeful action becomes indispensable. Otherwise, the explanation of organic activity would be contradictory, since chaos would dominate the order. The principle of the natural purpose deals with this problem, because it allows the organism to maintain its individuality within the chaotic environment and thus to preserve its harmony and autonomy.

A clock moves only by the driving force of the spring, but in the organism the organs stimulate each other and the whole organism is coordinated uniformly and dynamically by this interaction. The aggregate of the spring gears of watches can easily be constructed from single parts, which is why it can be discursively recognised by assembling and disassembling, i.e. the “analytical-general” (Kant, KU, AA 05: 407). On the other hand, the organism cannot be animated from the simple combination and sum of parts. Therefore, the investigation of the organism should be intuitively derived from the indivisible totality of the individual organs, i.e. the “synthetic-general.” The organic being is thus characterised by this complex causality and the relationship of the parts and the whole, and in order to recognise this adequately, both the natural purpose and a corresponding cognitive faculty, namely the “intellectus archetypus,” are required.

As mentioned above, intuitive understanding plays an extraordinary role in Kant’s philosophy. Intuition and understanding each play autonomous roles and do not share the task of cognition. Kant points out that sensuality has its basis in affection, and that understanding operates actively in the categorical classification of diverse representations. Sensuality is merely affected by the outside

world or a thing in itself and then evokes an impression of something. It is therefore primarily passive and determined by receptivity. In contrast to intuition, understanding consists in spontaneity, because the impression from passive sensuality itself does not prepare the active procedure of classification. The difference between intuition and understanding is clearly evident, because they are of a different nature and accordingly have different objects. Kant writes in the first *Critique*:

Our cognition comes from two basic sources of the mind, the first of which is the faculty to receive presentations (the receptivity of impressions), the second the ability to recognise an object through these presentations (spontaneity of concepts) ... If we want to call the receptivity of our mind, as far as it is affected in any way, sensuality, then the faculty to produce representations itself, or the spontaneity of cognition are understanding. (Kant, KrV, B, 74f.)

Intuition consists in a pure receptivity of sensory data and understanding, contrariwise, in spontaneity of categorisation. It is therefore inconceivable to unite these two different activities of cognitive processes in a compatible way, since the same faculty would have to be both passive and active. If the possibility of the intuitive understanding can be assumed despite this difference, then it enables an investigation that intuitively grasps a composite object, i.e. this wholeness is not categorised but immediately grasped as a totality. In doing so, the understanding does not show spontaneity with regard to the individual categories, but the conformity to law itself, because the analysis includes the categorisation of the whole and the result of this analysis should no longer be the totality of the object. The intuitive understanding does not treat the organism as a dismountable and random being, but as a harmonious and necessary one, namely as purposeful.

Goethe directs his attention to this extraordinary intuitive faculty and interprets it in the *Intuitive Judgment* as follows:

Admittedly, the author [Kant] seems here to point to a divine understanding, even if we in morality, through faith in God, rise into one of the higher regions of virtue and immortality, and approach the primal being: then it may well be the same case in the intellectual world that we, by witnessing an ever-creating nature, are made worthy of spiritual participation in its productions. While at first I had unconsciously and out of inner impulse insisted on this archetypal, typical, I even succeeded in creating a naturalistic expression, thus nothing was able to prevent me from courageously surviving the Adventure of Reason, as the old man of the Königsberg himself calls it. (Goethe, WA II, 11:55)

In Goethe's view, Kant's intuitive understanding contains an intuition that can grasp the productivity of the ever-becoming nature. As Kant defines it, the organic being carries within itself the formative force. In doing so, Kant chooses teleology as a scheme for comprehending this force. The formative instinct as a principle of life shows itself in the fact that it contains the possibility of a conceptual framework other than the mechanism, namely the natural purpose. And thus, due to the structural claim, the possibility of a corresponding capacity of cognition of the lawful totality of organisms is also necessarily demanded: the intuitive understanding.

Goethe sees intentions in this Kantian attempt that are very similar to his own natural science, because both scholars deal with the organic being and postulate that a special faculty is necessary to

comprehend it.¹⁴ Both investigations have the same intention, but this does not necessarily mean that the content of their research is identical as well, nor that Goethe adopts the Kantian thought in the same fashion. The most significant difference between the two approaches can be found in the recognition of the term “intuition.” This is expressed in Goethe’s essay quoted above. While Kant does explain a certain kind of “understanding” in the third *Critique*, Goethe only describes “intuition,” i.e. he prioritises a different key objective. Goethe’s change of the subject, on the one hand, involves a different vision of the developmental structure of intuition and understanding, which illustrates Goethe’s concept of the *a priori*, and, on the other hand, a difference in the intention and implication of research methodology between Kant and Goethe.

8. Exact sensual imagination

Goethe also observes an additional faculty that is hidden by the intuitive understanding. Before he wrote his essay *Intuitive Judgment*, Goethe sent a letter to the Grand Duchess Maria Paulowna on 3 January 1817:

In §3 there seems to me to lie a main deficiency, which became noticeable in the whole course of that [Kantian] philosophy. Here, sensuality, understanding and reason are listed as the main powers of our cognition [Vorstellungsvermögen], but fantasy is forgotten, thus an incurable gap emerges. (Goethe, WA IV, 27:308f.)

On the occasion of the publication of the treatise *Short Introduction of Kantian Philosophy* (*Kurze Vorstellung der Kantischen Philosophie*) by Franz Volkmar Reinhard, Goethe expresses his views on the Kantian philosophy. Goethe is of the opinion that Kantian philosophy lacks the inclusion of fantasy or imagination.¹⁵ In the above quoted letter, Goethe points out what he sees as a shortcoming of Kantian criticism: In his view, Kant did not recognise the invigorating principle of human cognition—the imagination—as an essential component and therefore did not emphasise it accordingly. In other words: Kant ignores imagination. However, for Goethe imagination is to be added to the main human faculties in addition to the cognitive faculties of sensuality, understanding and reason.

According to Kant, human knowledge takes place in the following way: Sensuality is affected by the thing in itself, and intuition perceives the sensory data according to the pure forms of time and space. The spontaneous understanding as determinant assigns these data to the twelve categories which are divided into four major classes. Finally, reason gives understanding a unity and limits the application of understanding within the adequate range. Intuition and understanding, however, are, as explained above, different faculties and there is actually no common ground between them. Imagination, as a common term, bridges this gap: It produces a scheme, and this scheme plays the role of a mediator between sense data and category. Kant assigns an important role to this faculty. If this were so, then Goethe would indeed have no claim to a critique of the role of imagination or fantasy.

However, in previous studies on Goethe and Kant this view is regarded as a mistake on the part of Goethe, because, in his first *Critique*, Kant already repeatedly addressed the imagination as a mediator between sensuality and understanding.¹⁶ However, the actual reason for Goethe’s reproach may lie in the change that the definition of imagination underwent from the first edition (1781) of the *Critique of Pure Reason* to its second edition (1787). In the second edition, Kant removed the following

sentence, which can be found in the first edition:

But there are three original sources (abilities or faculties of the soul) which contain the conditions of the possibility of all experience, and cannot themselves be derived from any other faculty of the mind, namely, sense [Sinn], imagination [Einbildungskraft], and apperception. (Kant, KrV, A, 94)

In the first edition of the *Critique of Pure Reason*, Kant defines imagination as one of the main faculties of human knowledge and counts it as an a priori, or as the originally acquired faculty. In the second edition, however, Kant deprives the imagination of this apriority and makes it dependent on other cognitive powers. Although imagination also plays an important role in the second edition, it is no longer an originally acquired faculty nor is it a transcendental faculty that is the source of all experience. Rather, it is a mere “synthesis.”¹⁷ Imagination loses its status as an invigorating principle of human cognition and its analysis cannot leave a deep impression on Goethe, because he only owned the second edition of the *Critique of Pure Reason*.

Therefore, it is crucial to consider Goethe’s remark about imagination. He writes in his letter to the Grand Duchess:

Fantasy is the fourth main force of our spiritual being, it complements sensuality, in the form of memory, it presents the worldview [Welt-Anschauung] to the understanding, in the form of experience, it forms or finds forms [Gestalten] to the ideas of reason and thus animates the whole human unity, which, without it, would have to sink into barren helplessness. (Goethe, WA IV, 27:308f.)

Goethe defines the imagination as a main faculty alongside sensuality, understanding and reason, and even characterises it as a certain invigorating power of all human faculties. Although this definition is close to the one in the first edition of Kant’s *Critique of Pure Reason*, Goethe expands the range of active areas of imagination more radically. Here he illustrates that imagination provides the ideas of reason with the “forms [Gestalten]” and places them on the same level. With this expression, ten years after Schiller’s death, Goethe once again restates the mixture of idea and experience, which Schiller repeatedly pointed out. And in this letter, his answer to Schiller’s question about the cognitive problem of the archetype is revealed. That is: imagination. Goethe asserts that imagination renders the incompatible natures of idea and experience—or of the archetypal plant—possible.

Goethe wrote the review *Ernst Stiedenroth: Psychology for the Explanation of Soul Phenomena* (*Ernst Stiedenroth: Psychologie zur Erklärung der Seelenerscheinungen*) that was printed in 1824 in the second issue of the second volume of the journal *On Morphology* (*Zur Morphologie*):

Thus, a man born and educated in the so-called exact sciences will, at the height of his rational reasoning, not easily understand that there can also be an exact sensual fantasy, without which no art is actually conceivable. (Goethe, WA II, 11:74)

Goethe emphasises that an exact sensual imagination, which is comparable to an exact science, is possible. According to him, imagination plays not only a role in the reproduction of memorised matter

or in the mere transmittal of sensuality to understanding, but also a role of exact production. Precision is an actual attribute of understanding, but in the field of *poiēsis*, imagination can also achieve a certain degree of precision. Goethe claims that imagination is not simply unbridled and unregulated, but that it is actually precise and exact, because it joins intuition and he now also includes the sensual ability for immediacy into his thesis.¹⁸ This immediacy of intuition means that there is no negation of intuition, hence the content of intuition is not arbitrarily modified. The sensual imagination illustrated by Goethe acquires exactness because of immediacy. Goethe builds the justification of his scientific research on this basis and emphasises that despite the lack of an objective and abstract theory, imagination demands a certain generality and precision.

9. Nature and imagination

In order to present the content of this almost omnipotent ability of the imagination in detail, a recourse to Kantian epistemology is necessary. For Kant, the power of imagination in theoretical cognition is, as it were, the hinge between intuition and understanding. An accumulation of sensory data does not turn into a rule of understanding and, vice versa, an infinite analysis of the concept does not transform itself into a single image. As long as there is no mediating ability, they are like light and darkness that are not mixed together. The schema as the product of imagination only plays a role as prism, which mediates light and darkness. As seen above, this ability also contains a riddle for Kant, because he cannot provide a clear explanation. He describes the origins of human cognition in the introduction to the *Critique of Pure Reason* in the context of the explanation of intuition and understanding:

Only so much seems to be necessary for introduction or preliminary remark that there are two stems of human cognition which perhaps spring from a common but unknown root, namely sensuality and understanding, through the former of which objects are given to us, and through the latter of which are thought. (Kant, KrV, A, 14, B, 29)

With the hesitant words “perhaps” and “unknown” Kant assumes that there is a common root of intuition and understanding. Since he describes this root as unknown, its explanation no longer appears in Kant’s *Critique of Pure Reason*. He addresses the issue again in his *Anthropology from a Pragmatic Point of View* (1798), but this time in a negative fashion:

Understanding and sensuality merge in their inhomogeneity just by themselves to cause our cognition, as if one originated from the other, or both from a common stem, which cannot be, at least for us is incomprehensible how the inhomogeneous could have sprouted from one and the same root. (Kant, Anth, AA 07: 177)

This quote is taken from the chapter “Of the sensual power of poetry according to its different types.” The immediately preceding chapter is titled “On imagination.” Here, Kant reflects on the common root of the two heterogeneous faculties in the context of imagination, but he denies them such a root and does not elucidate his reasons further in a categorical way. His concerns, if one can call them that, give rise to various possibilities of interpretation. It is not clear whether he expresses these ideas

without ulterior motives or whether to him imagination enters into a particular relationship with the common root of intuition and understanding. Imagination certainly connects understanding with sensuality and is identified in the first edition of the *Critique of Pure Reason* as one of the three sources of human faculty. From this expectation it can be deduced that he hereby means the respective root.¹⁹

The Goethean motif in science and art is directed towards the ever-becoming nature. Goethe constantly tries to grasp the productive fountain of nature's activities of as well as of works of art. In his natural sciences, he depicts the archetypal phenomenon and plant because they consist of the generative forces, and as is commonly known, Goethe also authored novels and poems. For him, these creative works are rooted in the same dynamic fountain as is nature's activity. Goethe asserts that to confront the extraordinary nature, one must be productive like nature. He describes the ability of imagination as an epistemological method, which is as exact as intuition, as general like an idea and at the same time as productive as nature. Goethe characterises this more precisely:

Fantasy is much closer to nature than sensuality, one is in nature, the other floats above it. Fantasy is a match for nature, sensuality is dominated by it. (Goethe, WA II, 6:361)

He writes this passage in the short, undated article *Poetic Metamorphosis* (*Poetische Metamorphose*), in which he comprehensively explains the relationship of imagination to nature and sensuality.

Imagination stands next to nature and is therefore closer to it than sensuality. It sounds unusual, however, that intuition does not have a close relationship to nature even though it directly perceives objects through which our cognition begins. According to the popular interpretation of Kantian epistemology, due to its immediacy and receptivity sensuality offers imagination and understanding an unprocessed raw material of perception. From this material, the imagination, with the help of its spontaneity, produces an abstracted image, namely a schema, which the understanding determines through categories. In aesthetic judgment, imagination proceeds freely and with its productive ability it is able to understand beauty and teleology of nature. This act is no longer about sensory data, but about the activity of imagination itself. Thus, imagination produces images from itself and relates them directly to understanding or reason. In the process of imagination, no relationship to nature is discernible. It even stands beyond nature, because it expresses itself arbitrarily and consists in the subjective principle of human beings.

However, Goethe emphasises a very close affinity of imagination with nature and at the same time its rebellion against nature. This statement is a reminder of the description discussed above, in which young Goethe explained his impression of the barefaced nature and what art can do to it, i.e. the power devouring power and the counterplay of art against it. From the results of the previous discussion, it can easily be concluded that art and imagination are natural and at the same time, in form of human action, supernatural while still being strongly related to nature since they are based on her productivity. To grasp and yet resist the living nature, imagination, just as nature, should contain liveliness or productive activity.

10. Conclusion

In his essay *Influence of the Newer Philosophy*, Goethe positively marks Kant's knowledge a priori. He shares with Kant the opinion that the source of human knowledge does not consist exclusively of

experience, which simply includes sensory data. The Kantian *a priori* represents the foundation of the cognitive faculty of human beings. According to Kant's conviction, this apriority exists in the understanding, because he, as a successor to Hume, stands in the context of the Age of Enlightenment and necessarily seeks the indispensable ground of rationality itself. However, Goethe excludes this premise of the Enlightenment and emphasises an even more fundamental source of the human being in the context of Weimar Classicism. According to him, at the time of ancient Greek culture, art was not yet strictly separated from science, nor should it be—as Goethe claims—be so in his own age.

The previous observations clearly show that Goethe's *a priori* is not to be found within understanding, but within imagination. For him, the source of the method for his natural science and art lies precisely in imagination. Imagination is not just a mere link between intuition and understanding, but the *a priori* of human faculty as a principle. He represents the originally acquired faculty of imagination as the cognition *a priori*, whereas for Kant it is the rational ground of understanding. To explore the nascent nature and to create works of art, an even more original ability than understanding is presupposed, and thus imagination is an indispensable basis for the productive activity. For Goethe, imagination is the most original faculty of the natural scientist and the artist, because it is in close proximity to nature and touches upon her eternal and perpetual state of becoming. This ability thus enables the comprehension of the protean nature without abstraction.

Schiller's question about the key concept of Goethe's natural science, whether the archetypal plant is an idea or an experience, or whether the archetypal phenomenon can be categorised at all, can now be answered: Goethe's original concept exists in both spheres, the idea and the experience, because his archetype is based on the unsplit root of intuition and understanding. Moreover, the categorisation in general is solely an outgrowth of this root, which is why the faculty of understanding is to be considered as a branch and leaf, so to speak, but not as its root.

Abbreviations

Kant, AA	Kant, Immanuel. <i>Gesammelte Schriften</i> . Edited by Preussische Akademie der Wissenschaften. Vols. 1-22. Edited by Deutsche Akademie der Wissenschaften zu Berlin. Vol. 23. Edited by Akademie der Wissenschaften zu Göttingen. From vol. 24, Berlin, 1900 et seqq. [Siglum follows Kant-Studien (Philosophische Zeitschrift der Kant-Gesellschaft)].
Goethe, WA	Goethe, Johann Wolfgang von. <i>Goethes Werke</i> . Herausgegeben im Auftrage der Großherzogin Sophie von Sachsen. Abtlg. I-IV. 133. Bände in 143 Teilen. Weimar: H. Böhlau, 1887-1919 [Cited by division, volume, and page].

Notes

1. Cf. Aristotle, *Nicomachean Ethics*, bk. VI.
2. *Praxis* means an activity among humans (including politics and ethics). *Theoria* is an activity that

considers the eternal unchangeable matters in the world on the basis of “*epistēmē* [ἐπιστήμη].” The Latin word *scientia*, later adopted as *science* in English, derives from *epistēmē*. This etymology easily indicates that knowledge as a result of scientific activity connects to theory (*theōria*).

3. Wilhelm Vollmer, ed., *Briefwechsel zwischen Schiller und Goethe* (Stuttgart: Cotta, 1881), 2:34.

4. These fragmentary passages are partly supplemented in by the editor Rudolf Steiner. They are also supplemented differently in the Leopoldina edition of the works of Goethe’s natural science by Rupprecht Matthaei and Dorothea Kuhn (cf. Johann Wolfgang von Goethe, *Zur Farbenlehre: Didaktischer Teil und Tafeln Ergänzungen und Erläuterungen*, ed. Rupprecht Matthaei and Dorothea Kuhn, div. II, vol. 4, *Die Schriften zur Naturwissenschaft*, Vollständige mit Erläuterungen versehene Ausgabe herausgegeben im Auftrage der Deutschen Akademie der Naturforscher Leopoldina, ed. Rupprecht Matthaei, Wilhelm Troll and K. Lothar Wolf et al. (Weimar, 1973), 1). However, the supplements in each edition do not offer a possible final and consistent interpretation of these passages.

5. Goethe edited this article in 1830 and replaced the title with *First Acquaintance with Schiller (Erste Bekanntschaft mit Schiller)*.

6. Ernst Cassirer, “Goethe und die mathematische Physik: Eine erkenntnistheoretische Betrachtung,” in *Aufsätze und kleine Schriften 1902-1921*, ed. Birgit Recki, vol. 9, *Gesammelte Werke*, Hamburger Ausgabe, (Hamburg: Meiner, 2001), 281.

7. Ibid., 282.

8. Cf. John Locke, *An Essay concerning Human Understanding*, bk. 2, chap. VIII, sec. 9 and 10, *The Works of John Locke*, printed for Thomas Tegg (London, 1823), 1:119f.

9. “8. The influence of Kantian philosophy on my studies.... Influence of Kantian Philosophy continued.... Later Kant, preparing for tomorrow. / 9. Intuitive understanding (Kant’s) on metamorphosis of the plant regarding.... 10. Intuitive understanding” (Goethe, WA III, 6:106).

10. This description by Goethe corresponds to the following passage from the introduction to Kant’s *Critique of Pure Reason*: “But, though all our knowledge begins *with* experience, it does not mean that all derives *from* experience” (Kant, KrV, B, 1).

11. Cf. Michael Oberhausen, *Das neue Apriori: Kants Lehre von einer “ursprünglichen Erwerbung” apriorischer Vorstellungen* (Stuttgart-Bad: Cannstatt, 1997). Yuichiro Yamane, “Eine Studie zum kritischen Begriff ‘a priori’ als ein Sachverhalt, der ‘ursprünglich erworben’ wird,” *Kant-Studien* 101, 4, (2010): 413-428.

12. The object of divine intelligence is called *noumenon* and that of human cognition is called *phaenomenon*. Kant denominates the “noumenon” with a different term, i.e. as “understanding being [Verstandeswesen],” and the “phenomenon” as “sense being [Sinnenwesen]” (Kant, KrV, B, 306).

13. Here the reason for Schiller’s criticism of Goethe’s natural science becomes clear: Schiller shows Goethe this difference precisely, namely that Goethe’s key concept of the archetypal phenomenon or plant is a *semblance of reason* and that Goethe falsely claims to be able to see a concept of reason directly with his eye or by intuition. According to Schiller, Goethe’s archetypal plant is an absolute being. Although it can make determinations of the individual plants possible, it does not show itself in any concrete plant. Since the archetypal plant is not a being in time and space, it cannot be understood as a phenomenon. In Schiller’s view, Goethe’s assertion refers to nothing else than a determination of the noumenon with the help of the inadequate form of the phenomenon and is nothing else than a conventional metaphysics, which, after the Kantian criticism, must be overcome. Since Goethe, for his part, did not want to return to an obscure metaphysics, he could not defend himself against this rational discussion.

14. Eckart Förster addresses the intuitive understanding in relation to Spinoza's "scientia intuitiva" and Goethe's natural science. Förster thus identifies the intuitive understanding as a concrete example in the method of Goethe's natural science (cf. Eckart Förster, *Die 25 Jahre der Philosophie: Eine systematische Rekonstruktion* (Frankfurt a. M.: Klostermann, 2012), 253-276).

15. There are similar names for the "Phantasie" as "Imagination" or "Einbildungskraft" and Goethe does not distinguish them clearly (cf. Goethe, WA II, 11:75 and Goethe, WA I, 41:131). Cf. on the historical development of the concepts of fantasy and imagination: Barbara Ransch-Trill, *Phantasie: Welterkenntnis und Welterschaffung: Zur Philosophischen Theorie der Einbildungskraft*, (Bonn: Bouvier Verlag, 1996).

16. Cf. Rudolf Haym, "Goethe an die Großfürstin Maria Paulowna über Kants Philosophie," *Goethe-Jahrbuch* 19, (1898): 34-48; Karl Vorländer, "Goethes Verhältnis zu Kant in seiner historischen Entwicklung I-II," *Kant-Studien* 1, (1896/97): 60-99 and 315-351.

17. It is true that Kant, in his *Critique of Judgment*, described imagination as a "free play [freies Spiel]" with understanding and reason, and he attempted to give it great significance. However, the determination of the faculty of imagination includes only *free play*, i.e. Kant does not show what the ground of imagination actually consists of.

18. Goethe recognises a relationship between imagination and intuition. He explains this in more detail in a letter to Carl Ludwig von Knebel on 21 February 1821: "The *imagination* joins the intuition; it is first of all *imitative*, only repeating the objects. Then it is *productive* by animating, developing, expanding and transforming what is touched" (Goethe, WA IV, 34:136f.).

19. Martin Heidegger discerns imagination as this root and explains this in his treatise *Kant and the Problem of Metaphysics* (1929) with reference to the transcendental imagination. In his view, the transcendental imagination is the root of sensuality and understanding. He even argues that "the interpretation of the transcendental imagination as the root of the two stems [of sensuality and understanding] is not only possible but necessary" (Martin Heidegger, *Kant und das Problem der Metaphysik*, ed. Vittorio Klostermann, vol. 3, *Gesamtausgabe* (Frankfurt a. M.: Klostermann, 1991), 178).