The Imaginative Spectrum:
Kantian Imagination
and Non-Conceptual/Conceptual Interactions

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1. Introduction

The imagination has earned a dubious reputation in recent years. On the one hand, there is an increasing number of publications devoted to studying it; but on the other, the term "imagination" functions as an umbrella term for ideas and theories that are hard to categorize.[1] Not seldom, the imagination is either equated with creativity, reduced to the capacity for manipulating mental images, or simply confounded with intuition. To complicate this issue further, the topic of imagination surfaces in another ongoing discussion: whether our cognition is essentially conceptual or essentially non-conceptual, neither or something else. This issue has received ample attention in the past decade, and again, the complexity of the terminology and the somewhat *ad hoc* character of some distinctions used in the debate contribute little to a clear view of what is at stake. For instance, non-conceptual content is seen as something fundamentally contrastive – a negative mirror image of conceptual content.[2] Alternatively, one wonders what we actually *can* say about non-conceptual content, if anything.[3] If the core issue is already so vaguely described, any subsequent attempts to build on this foundation inherit some of its vagueness.

Imagination and non-conceptualism both figure in the debate on the roles of the imagination in the interplay between conceptual and non-conceptual content.[4] In recent contributions, conceptualists and non-conceptualists have put their views forward, with a variety of viewpoints as result.[5] Even allowing for those, I am not sure whether the non-

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[1] (Kind, 2017:1).

[2] (Bermúdez and Cahen, 2015); Unlike Speaks (2005), who formulates the issue in terms of structured and unstructured propositions, Hanna (2011) distinguishes between two types of content whose *semantic structure and psychological function* are different in kind. This move has the advantage that it moves away from narrowly propositional concerns to a broader semantic and/or psychological view, thereby undermining the highly questionable move of formulating discussions about mental content in exclusively propositionalist terms.

[3] See (Speaks, 2005). The riddle is how we can correctly characterize the non-conceptual. Speaks's proposal is to distinguish between *unstructured* and *structured* propositions: that is, we should regard the non-conceptual contents of perceptions and the conceptual contents thoughts as, respectively, (i) unstructured propositions and (ii) structured propositions. However, this move throws one back into a kind of "sentialism" or "propositionalism" in which either the structure of *the tools used to think about thinking*, or the structure of *the vehicles of thinking*, are conflated with the structure of thought itself. It is a case of confusing the syntax of thinking with its semantics.

[4] There is another issue that has a direct bearing on this discussion, namely, the nature of concepts. For purposes of brevity and simplicity, I will avoid delving too deeply into this particular issue, but it will play a limited role in sections 3–6.

[5] (Peacocke, 1998; Speaks, 2005; Bowman, 2011; Hanna, 2005, 2008, and 2019),

conceptual/conceptual distinction captures *at all* what I want to say about the imagination and its relation to conceptualism and non-conceptualism.[6]

Questions about the nature of the imagination and the conceptual/non-conceptual distinction are intimately related. In putting my view forward, I address both problems simultaneously. This strategy has the considerable advantage that I can provide a broad and wide-ranging discussion; but at the same time, it does not allow me the luxury of isolating them and discussing each of them separately.[7]

To be clear about my aim, I will defend the following thesis—

The Imaginative Spectrum (ImSp) Thesis: The imagination has the character of a continuous semantic and cognitive spectrum that spans the non-conceptual and conceptual domains of representational content and cognition. These domains are co-extensive, and thus freely interacting with one another.

In order to support the ImSp thesis, an array of claims must be defended. In section 2, therefore, I provide an outline of what I am about to argue and explain its relevance. In section 3, I argue against McDowell's thesis that distinguishes between spontaneity and receptivity and will defend the claim that that perceptual content must be conceptualizable. Yet, this conceptualization does not happen by sheer magic. We must imagine non-conceptual &/or conceptual interactions as a continuous gradient that we can access in different ways. Section 4 deals with this topic. Kant's notion of reflective judgment plays an important role in conceptualization and will be discussed in section 5. It is generative and part of what I have called "creative oscillation" elsewhere. Section 6 deals with the notion of multiple apprehension, again with a recourse to Kant.

1.1 The Garnier Analogy

Conceptual capacities constitute a necessary part of our cognitive apparatus for describing the world around us. The capacity and skill for using of concepts may have evolved with language, whether in a linguistic or visual sense. As such, concepts influence what we can think and how we think. If we imagine the reach of our cognition as a vast plane, the conceptual domain is situated on it like a cupola. Human beings experience a significant part of the world from within the cupola, occasionally bumping into its walls—for example, when one literally "searches for words" and forms of description. This image captures the core of conceptualism: either one experiences reality through concepts, or otherwise no experience is possible, since concept possession/application is a necessary condition for judgments. To have an experience is *a fortiori* to be applying concepts. This viewpoint also underlies the sharp distinction that McDowell draws between spontaneity and receptivity.[8]

Holding the domain of non-conceptual content fixed for the moment, as the homogeneous plane below the conceptual cupola that oversees the plane, we can also imagine an alternative vision of conceptualism. The non-conceptual plane remains the same, but the realm occupied by concepts is more like a settlement or a series of occupied zones with shifting boundaries. The two domains seamlessly pass over into each other, and the non-conceptual is as reachable as the conceptual domain. To use John Dewey's term: they are *co-extensive* with

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[6] (Pereira 2015).

[7] Because of that choice, this essay has been "in the works" for over two years. Correspondingly, here is also a very special thanks to Robert Hanna, who took the time to comment extensively on an earlier draft, and whose comments deepened and extended this piece in a direction that I could not envision at the beginning.

[8] (McDowell, 1996:10–13).

one another. The best spatial analogy I can think of to illustrating my point is the 1917 *Cité Industrielle* plan by Tony Garnier:
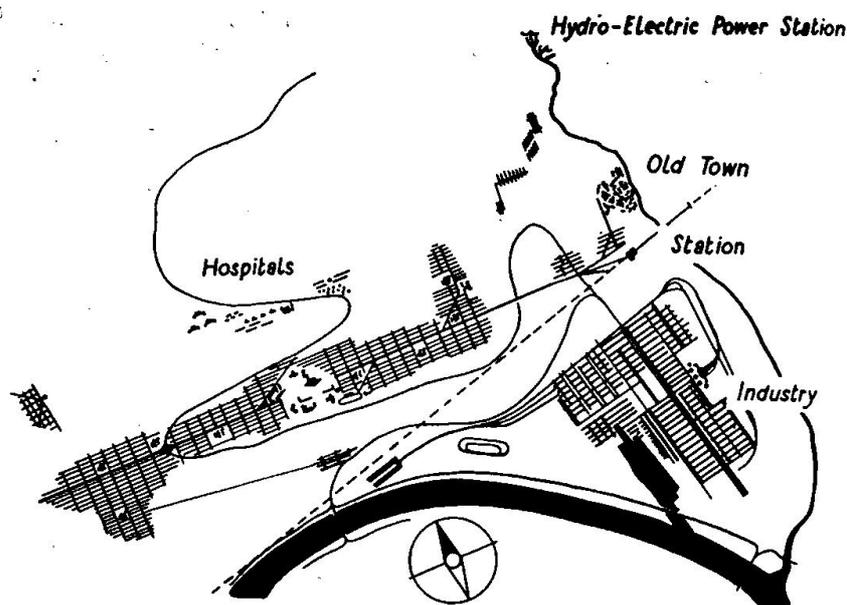

Figure 1: Garnier's 1917 plan for the Cité Industrielle.
Each of the components (streets, railways, centres, main roads) is linked to others, but the overall built zone could be extended infinitely, without being constrained by a grid or concentric organization; openness is built into it.

In contradistinction to the more conventional city-models created by his contemporaries, based on concentric, centralized organizations or rectangular, homogenizing grids, Garnier devised an open model of thinking about cities that was in principle extendable *ad infinitum*, because openness was integrated into the very texture of its compositional elements (fig. 1). A grid can only be extended by using the same element over and over; a concentric organization revolves around a central point. This means that either the space is completely structured or else it is not. The Garnier plan proposes a new alternative: it devises a series of zones that are more-or-less structured on a theoretically infinite plane. The composition of the zones and their interrelations are flexible and can be changed at any moment. I visualize the interaction between non-conceptual and conceptual content analogously.

The version of non-conceptualism I defend here is *epistemic* and *semantic*, in the sense that (i) it regards the non-conceptual as an epistemic domain that differs from the conceptual and (ii) it regards non-conceptual contents as having a semantic, affective, and psychological structure that is different from that of conceptual contents.[9]

Furthermore, the version of non-conceptualism defended here entails that non-conceptual content (i) need not necessarily be accompanied by conceptual content even if it is always actually so accompanied, (ii) is necessarily underdetermined by conceptual content, and (iii) requires the continuous intermingling of conceptual content and non-conceptual content.

I accept the existence of non-conceptual content. Therefore, the issue for me is to provide a tentative explanation how non-conceptual content *interacts* with our conceptual capacities—with the added proviso that this might be an incomplete account, or indeed one among many. Addressing the question of the roles that the imagination serves enables us to

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[9] In this, I more-or-less follow Hanna's version of non-conceptualism, with the added twist that my version emphasizes the need for *non-conceptual/conceptual interactions* in the imagination.

understand non-conceptual content more deeply and allows us to see how the conceptual and non-conceptual interact within imaginational cognition.

1.2 Concept Possession

Conceptualism in its current form leans heavily on a kind of linguistic access to the world.[10] Concepts are viewed as "labels" that serve as stand-ins for more complex bodies or "files" of semantic information. Language is indispensable for communication, so the possession of concepts depends heavily on the possession of language and especially relies on its linguistic form or syntax. This is why the thesis that pre-linguistic infants do not use concepts or have conceptual capacities has a certain sting for non-conceptualists *and* conceptualists alike: without language, it is hard to see how concepts can be communicated, and thus it is correspondingly hard to see how either individual or mutual understanding is achieved.

It is easy to see how the view that concepts are "labels" leads to the thought that they are like files on a hard drive. In turn, using this analogy easily leads to the view that concepts are *isolated packages of information*.

Essentially, on this account, one must *possess* a concept to *apply* it. Possession of a concept is then the presence of the concept in a kind of mental library or filing cabinet, shelved with an appropriate level of generality, from which it is retrieved at the appropriate moment.[11] In practice, this means that the concept "light blue" is retrieved once a light blue object is encountered or when one thinks about a light blue object. It is the mark of a conceptual state that it activates such recognitional abilities; correspondingly, a non-conceptual state does not do this.[12] What happens in "applying" is being able to relate the contents of a perceptual experience to an (agreed-upon), appropriate linguistic label, and being able to apply it in the appropriate situation. This is the Sellarsian "space of reasons" in which "[o]ur propositional attitudes actualized as exercises of conceptual capacities have complicated reason-giving relations among themselves."[13]

1.3 Working Definitions

In this sub-section, I present working definitions of three core notions: conceptualism, non-conceptualism and imagination. The working definition of each term is based on a variety of sources that capture in reasonable detail what is at stake in the debates surrounding them.

Conceptualism: Mental content is necessarily and sufficiently determined by conceptual capacities, enabling an agent to form targeted beliefs, desires or judgments with the help of concepts.

Non-Conceptualism: Mental content exceeds our conceptual capacities, both as regards its necessity and as regards its sufficiency for determining mental content. Hence, the precise nature of this content cannot be grasped by means of concepts alone – if this were possible, it would be simply conceptual.

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[10] See (Speaks, 2005).

[11] See (Evans 1982; Oguchi 2015).

[12] (Kriegel, 2004).

[13] (Oguchi, 2015:4).

> *Imagination:* The synthesizing capacity for representing objects in their absence (general imagination) and its associated functions of memory, daydreaming, creativity, and anticipation, and some forms of seeing-as. Therefore, the imagination can be discussed in two different ways: in general terms (all-purpose imagination) and in terms of specialized (dedicated) functions.

2. Splitting Up Spontaneity and Receptivity: A Rejection

As starting point for developing my alternative proposal regarding the interactions between non-conceptual and conceptual contents, I use Speaks's clear and concise reconstruction of the core argument for conceptualism, as presented by McDowell:

> 1. Perceptions provide agents with reasons for forming certain beliefs.

> 2. If perceptions provide agents with reasons for forming beliefs, the contents of those perceptions must be conceptual.

> *Conclusion:*

> 3. Therefore, the contents of perceptions must be conceptual.

According to McDowell, conceptual capacities are already operative in experience itself. Starting out from Kant's distinction between the receptivity of the intuition and the spontaneity of the understanding, McDowell contends that the only way to prevent from being incoherently bounced back and forth between the roles of spontaneity (understanding/conceptual thought) and receptivity (sensibility/experience) is to accept the argument made above. The very way in which things *appear* to us is held to be proof of the ceaseless operation of conceptual capacities.[14] McDowell concludes from all this that "we are left with a picture in which reality is not located outside a boundary that encloses the conceptual."[15] Conversely, non-conceptualists insist that the non-conceptual plane extends well beyond the conceptual cupola. Often, the "fineness-of-grain" argument is invoked to argue for the existence of a non-conceptual domain. More specifically, the fineness-of-grain argument says that "the notion that the representational content of a perceptual experience is much richer and more detailed than that which we can grasp in thought."[16]

This line of thinking does not itself prove that the contents of perception are either conceptual or essentially non-conceptual. While, for example, McDowell and Noë raise important points with regard to the *nature and application of concepts*, their arguments do not prove that *perceptual contents are conceptual*, or that concepts are always operative in perception. Even if concepts were always operative in perception, this would not prove that therefore all perceptual contents are conceptual, or somehow fall under the influence of concepts. The line of reasoning used by McDowell and Noë assumes too hastily that because we can form beliefs on the basis of perceptions, they must have had a conceptual character all along.[17] The argument makes a mistake in construing this connection:

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[14] (McDowell, 1996:62).

[15] (McDowell, 1996:44).

[16] See, e.g., (Noë, 2000). For other discussions of the fineness-of-grain argument see (McDowell, 1996:56–57; Evans, 1982:229; Oguchi, 2015).

1. To form beliefs about perceptual content G, G must be conceptual (per McDowell's definition)

2. If G is a perceptual content about which beliefs are formed, it must conceptual (otherwise belief formation is impossible).

3. If G is conceptual, it cannot be non-conceptual (law of excluded middle).

Step 3 assumes an all-or-nothing choice about perceptual content: either it is essentially conceptual or it is essentially non-conceptual, *tertium non datur*. This move rests on two questionable assumptions: first, a given perceptual content can be, essentially, only one thing both at a time and over time; second, the transition from non-conceptual content to conceptual content is complete and instantaneous and cannot happen piecemeal or gradually. By contrast, the line of reasoning that seems much more plausible to me is also signoficantly more modest:

1. To form beliefs about perceptual content G, G must be *open to conceptualization* (its contents must be such that it can be grasped by using a concept in the future).

2. If G is a perceptual content about which beliefs are formed, then it must have been open to conceptualization (as one needs a concept to form beliefs about it).

3. This does not rule out the possibility that some of its contents are essentially non-conceptual and could be conceptualized later on, not at all, or only partially.

In the simplest case, we might think of conceptualization as an activity that subsumes a conglomerate of sensory impressions under a category (i.e., this is a plant, this is a tree, this is a birch, etc.), or an array of sensory impressions that are synthesized into a manifold. In Kantian terminology, this is a "determining judgment". In a less straightforward case, we may have perceptual contents that are essentially non-conceptual but the link to conceptualization does not run via subsumption. A good example is the use of demonstratives: I can see that this wall is longer than that desk without having an idea about the metric system. In this case, the metric system is a more precise, notational system centred around the metric unit. Once this is understood, the demonstrative concept is deepened, or becomes superfluous altogether. It is a placeholder for some cognitive or semantic content, but it can develop and grow.

The notional poles of receptivity and spontaneity that Kant (and McDowell, following him) postulate, it seems to me, engage in a complementary dialectic. McDowell, however, treats it as a hard-and-fast distinction. But if we understand the relationship between receptivity as spontaneity as a complementary dialectical one, not only can the thesis of the intermingling of non-conceptual and conceptual contents be nicely supported, but also the acquisition and development of concepts can be neatly explained.

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[17] McDowell's view rests on his conception of the relationship between spontaneity and receptivity. By equating conceptualization with spontaneity (1996:9), McDowell can say that our conceptual capacities determine the character of perceptual content. In other words, there is no sensible intuition without its conceptual counterpart that structures it.

3. Conceptual Accretion: The Growth of Concepts

In an illuminating discussion of the work of C.S. Peirce's view of concepts, Susan Haack has convincingly demonstrated how our view of concepts can be extended to support the dialectic of spontaneity and receptivity. Instead of being a rigid designator, a concept is a fluid label that can be filled up with content. By listing a series of discoveries that deepened and extended our understanding of the concept of DNA, Haack convincingly shows how an increasing amount of semantic content gradually *accretes* in a concept (Haack, 2009). Each new layer of facts is included in a basic yet provisional definition of the concept. That concepts grow is a view commonly ascribed to C. S. Peirce, but some aspects of this idea can already be discerned in Kant's notion of reflecting judgment. The reflecting judgment is generative and projective, because it gives meaning to an object that cannot be merely subsumed under an existing concept, but must instead be comprehended by a novel concept generated by the act of judgmental reflection. (EEKU, 20:217-218; KU, 5:179-181). A further application of this idea can be found in the philosophy of science developed by Hans-Jörg Rheinberger. In scientific experiments, design experiments, and in producing artworks, targeted repetition is a proven strategy. Experiments are repeated and improved; paintings are being remade and new sketches are added over and over again. This iteration is not just mindless reproduction. It is a constructive gesture, accumulating and changing previously acquired understanding by adding objects for into a "multiple apprehension". Both non-conceptual and conceptual contents inhering in scientific or artistic ideas are gradually worked out by changing parameters, keeping some features constant while changing others or simply by putting an idea upside down. This stepwise process unearths the relationships between them, allowing one to get a discursive and conceptual grip on them.

This does not imply that such processes simply run from indeterminate to determinate in a linear, unbroken line of ever more conceptualized proposals. Rheinberger emphasizes the fact that the repetition inherent in cognitive and experimental processes is *differential*. The act of repeating creates variations within an experimental space. Differential repetition creates sets of experimental results or clusters of loosely connected ideas that are not just dissimilar, but that illuminate different aspects of a given, underlying body of non-conceptual/conceptual contents. Given the fact that such bodies of content are often underdetermined and open-ended, this procedure is an absolute necessity:

> All innovation is in the end and in a fundamental, sense the result of repetition. The emergence of new phenomena is necessarily related to what already is known. Without such coproduction, there is no possibility for comparison: the result is a swift dissipation of the collected knowledge contained therein, embodied in the reproduction of the system. (Rheinberger 2005:59).

Rheinberger's description of differential repetition closely resembles Kant's notion of reflecting judgment. By superimposing multiple apprehensions, new insights are gained, and a kind of "common ground" between them is discovered.[18] The imagination is busily at work in differential repetition, as the faculty of synthesizing manifolds that are purposively manipulated and superimposed.

The line of reasoning pursued by Haack and Rheinberger opens the door for thinking in more detail about the synthesizing roles of the imagination between the non-conceptual and conceptual domains. If concepts can grow, deepen and extend, it follows that the earliest versions may be regarded as embryonic stages of matured versions. It also follows that concepts are elastic in the sense that they are not "rigid designators", but instead they serve as

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[18] This "common ground" is not necessarily a synthesis in which all differences disappear. Neither does a multiple apprehension always result in an average, as Kant appears to maintain.

pragmatic grips on the world.[19] Such concepts are early-stage concepts, the contents of which and relationships to other non-conceptual and conceptual contents are unclear and not fully worked out or emerging.

4. Kantian Reflection and its Imaginative Importance

Elsewhere, I have argued that we can understand determining and reflective judgments as operating in a cycle of *creative oscillation*.[20] Determining judgments are located on the inductive/deductive side of the cycle : they subsume, order and determine objects. Alternatively, when confronted with a genuinely new object, reflective judgments engage in reflective, comparative and generative reasoning to invent or define a new concept for an object.

In addition, a reflecting judgment *can* be aesthetic. For instance, a sculpture may invoke a feeling of pleasure in me, but that is what Kant calls a "subjective determination" (EEKU, 20:221-223). It affects *me*, but perhaps not *you*. The inventive move on Kant's part comes in when he distinguishes between (i) a cognition (*Erkenntnis*) of an object by means of a determining judgment of experience, and (ii) an aesthetic judgment made about it. I can see the sculpture distinctly and clearly in the manner described in the first *Critique*, so I can see it as I would see any other object in the vicinity. The "artistic extra" that concepts cannot provide (rendering thereby the faculty of understanding useless) arises sensibly. The objectively determining judgment and cognition that "there is a sculpture over there" is largely decoupled from its aesthetic impact. Objectively, I may have subsumed the stone volume under the concept "sculpture", but that says nothing informative about its affective properties or qualities as an artwork. The aesthetic judgment "without presupposing a concept of its object, nevertheless ascribes purposiveness to it" (EEKU, 20:244). The strategy is to postulate an additional purpose that allows one to grasp the properties of the object and view them as *open to novel conceptualization*. As such, the reflecting judgment is closely similar to "reasoning forward", "projective reasoning", and to C.S. Peirce's notion of "abduction".

Peirce's notion of abduction deserves some special attention. While it has been read as the formation of mere hypotheses, or a verson of inference-to-the-best-explanation, Peirce himself held that it was a type of generative reasoning.[21] The form of abduction is not syllogistic but instead creatively generates or uncovers novel representational content that helps one to explain or understand phenomena.[22] Otherwise: "clearly this rational regulation comes from devising explanations which render the facts less isolated." Abduction thus makes "a conceptual leap," as it were, by formulating a cloud of hypotheses, some of which effectively explain how individual facts hang together.[23]

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[19] (Wittgenstein, 1953:§§203–207, 82ᵉ).

[20] See (Paans, 2020).

[21] See (Douven, 2017) for a general introduction.

[22] See (Psillos, 2011).

[23] See (Psillos, 2011:123): "For Peirce then there must be a mode of reasoning which is both ampliative and generates new ideas. How this could be possible preoccupied him throughout his intellectual life. The key idea was that new content is generated by explanation — better put, explanatory reasoning (viz. reasoning that is based on searching for and evaluating explanations) is both ampliative and has the resources to generate new content, or new ideas." And for a discussion of the several different accounts of abduction in Peirce's work, see (Deutscher, 2002:471).

Of course, background beliefs and competence play a role in abduction. Given a set of background beliefs, one may regard certain hypotheses as being more plausible than others:[24]

> The *logica utens* of a reasoner is the undeveloped theory of logic that he uses as a basis of his reasoning. After careful and systematic study of the process of reasoning one arrives at a logica docens, which is an improved and scientific theory of logic. Though Peirce never applies this distinction to abduction, it strengthens his position to do so and to say that man's natural insight into truth is a *logica utens* which can be developed by abductive logic. It follows that it is the task of logic to bring into critical consciousness one's instinctive habits. (Burks, 1946:303).

A similar thought can be found in Hegel's *Phenomenology*, when describes how a science becomes self-conscious by developing discursive insights into its own presuppositions. (Hegel, 1977:16–17). However, unlike the Hegelian conception, the hypotheses used in Peircean abduction are not mere propositions that deal with concepts only. To think so, is to end up in questions that underestimate the practical value of Peirce's approach and that easily relapses into uncritical Conceptualism. To train oneself in abductive reasoning is to utilize one's instinctive habits in the pursuit of reasoning: it is not an attempt to *overcome* them, but to *incorporate* them.

This is why Kant's insight that we postulate a purpose for objects when reflecting on them is so apt. The purpose is an "extra" that is not a mere hypothesis, but that is more akin to a "lens" through which one decides to view the world. It develops the habit of "seeing-as", i.e. the capacity to regard given sensible content *as* something that extends beyond its describable, empirical properties (Schön, 1987:140). Alternatively, a postulated purpose activates the capacity to interpret an object as being purposive, opening up the mind to its affective, emotive or expressive impact. Kant emphasizes this point by distinguishing between the *modus aestheticus* and the *modus logicus* of synthesizing a "presentation," in the sense of a manifold of representations (KU, 5:318-319). In the aesthetic mode, one develops a feeling for the unity or inner coherence of a presentation; in the logical mode, it is evaluated using rules, principles, and concepts. Like Peirce's distinction between "instinct" and "reasoning", the Kantian distinction captures two modes of human experience: one that is not dependent on concepts, while the other is.[25]

The attitudinal disposition used in reflection and reflecting judgment extends well beyond hypothesizing. It can operate as a micro-theorizing why a given state of affairs is as it is, or as a survey on what possibilities an object offers. Independently of but similarly to Peirce, R.G. Collingwood proposed an "erotetic logic of research".[26] His idea was that one should entertain "a firm anticipation" of what one expects to find. This anticipation is a quasi-intention, a tentative answer, theory, or body of assumptions that structures the first steps of inquiry, extrapolating from what is being observed. A conjecture or tentative explanation differs from inference to the best explanation, because the latter is a relatively well-developed body of assumptions, propositions, and inferences in which a possible answer is included.

Peircean abduction and Kantian reflection are both forms of *productive argument* (Hasenhütl, 2010:104–105). They actively construct an edifice of inferences and judgments about a body of contents that span the non-conceptual *and* conceptual domains. Thus, this type of argumentation does *not* constrain reflection to concept-driven modes of thinking: to hold this would be to relapse into the Hegelian mode of reasoning. The effect that a given object

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[24] (Psillos, 2001:134-135).

[25] One could argue that Hegel's Conceptualism simply goes too far, while Kant's treatment is more even-handed. Hegel's account of Spirit describes the movement and development of the Notion, i.e. a dynamic concept, constricting the analysis to conceptual content.

[26] See (Bamford, 2002:250; Pirolli, 1992:24).

brings about, or the expressive power that it possesses in relation to the cognitive subject, can be experienced non-conceptually and affectively, and this influence heavily determines how one thinks or reasons about it.

If we redirect our view from the bridge between non-conceptual and conceptual contents towards the role of the imagination, we see that the broadly Kantian definition that imagination is the faculty for "intuition without the presence of the object" is unambiguous yet misleading (A118-119/B151; Anth, 7:167). It is unambiguous in the sense that there is a broad agreement that imagination provides the capacity to manipulate and generate mental imagery. However, this definition does not do justice to the different uses of mental imagery such as daydreaming, heuristic thinking, dreaming, or pretend-play. Kant himself must have been well aware of this, as he quickly adds some qualifications to the initial definition.

According to Kant, the *reproductive* imagination is governed by the "empirical laws of association" or "conditions of experience". Conversely, the *productive* imagination is explicitly equated with spontaneity.[27] While the productive imagination is inventive, the reproductive imagination is recollective (Anth, 7:167-168). The reproductive imagination takes past experiences as point of departure, while the productive imagination exercises a larger degree of freedom engaged in projective reasoning or abduction.[28] We see here how Kant accounts for the association of past impressions into experience of the present and anticipating the future. The reproductive imagination ceaselessly synthesizes past impressions with occurrent ones. While Kant thought that this process would conform to natural laws, nowadays we would probably augment his account of remembering by using the distinction between non-conceptual and conceptual content.[29]

Spontaneity is at the core of Kant's thinking about various specific functions of the generic or "all-purpose" imagination. He even names the imagination the "active faculty of the synthesis of [the] manifold [of perceptions] in us" (A120). For the purposes of this discussion, I will follow the Kant/Hanna distinction between (i) the generic (or all-purpose) imagination and (ii) the specialized (or dedicated) imagination (Hanna, 2001:31-45, 2020).

The notion of a generic or all-purpose imagination can be clearly discerned in this passage:

> [T]he empirical power of cognition of human beings necessarily contains an understanding, which is related to all the objects of the senses, though only through means of intuition, and to their synthesis by means of imagination, under which, therefore, all appearances as data for a possible experience stand. (A118-119)

Having reserved this central cognitive role for the imagination, Kant says that the imagination is the faculty for synthesizing the manifold. The action of this synthesizing imagination directly on perception is *apprehension* (A120). The imagination synthesizes the elements of the manifold (given through intuitions) into a unified representation, forming a manifold of intuitions, which in turn directly represent worldly objects. In a subsequent stage of the cognitive process, the understanding applies concepts to these manifolds of intuitions, and by means of them, to worldly objects.

The generic synthesizing character of the imagination could be understood in a multitude of ways.[30] The imagination applies its synthesizing activity to the materials given in

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[27] See, e.g., (Bertram 2013:34–35; Horstmann 2013:11).

[28] See, e.g., (Matherne, 2017:55–56).

[29] See, e.g., (Dehaene, 2013).

sensible intuitions, in order to provide rudimentary ordered materials to the understanding where concepts are applied to it. It is important to stress that the imagination bridges the non-conceptual and conceptual domains, building connections between them in and through manifolds, making the two domains co-extensive with one another:
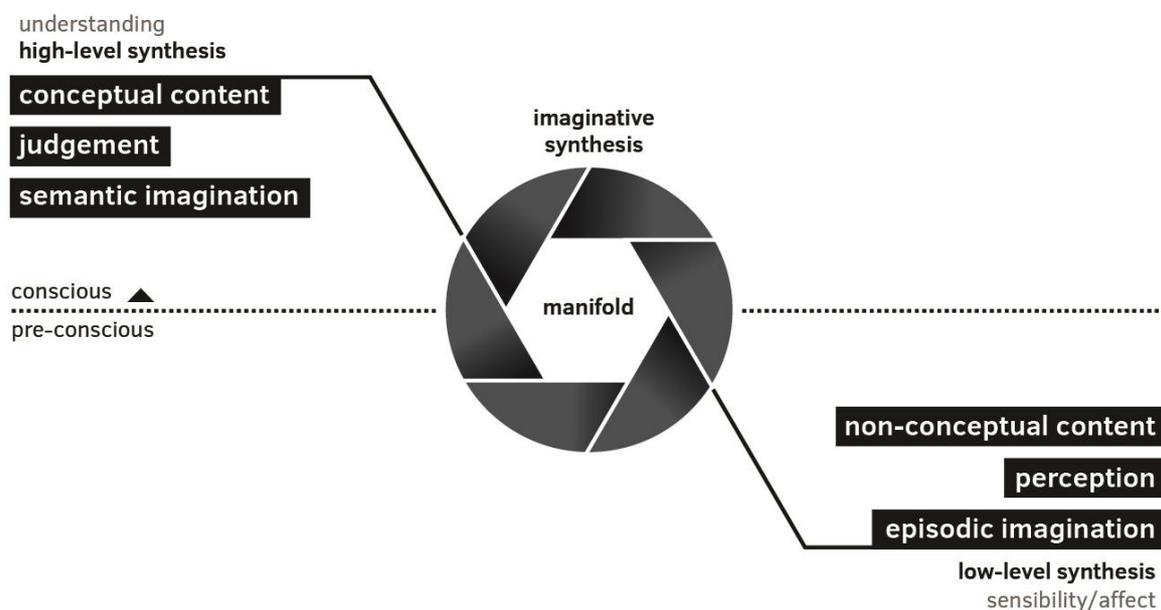

Figure 2: Dual-level imaginative synthesis, linking non-conceptual/conceptual, perception/judgment and episodic/semantic imagination.

So construed, Kant is saying that the basic cognitive role of the imagination is to mediate between the streams of sensory impressions and the structuring activity of the understanding.[31] The core of these mediating efforts seems to be a *representative, imaginative* synthesis. It is representative because the apprehension-imagination pair represents manifolds to one's consciousness. However, the process of representation is layered, gradual, and spans both the non-conceptual and conceptual domains of cognition: it is an imaginative spectrum. High-level synthesis allows one to judge self-consciously and to deliberate; low-level synthesis occurs at a pre-conscious level and is felt or experienced rather than "known" in the sense of the justified true belief. This means that there are different levels of synthesis (or representation) that are located at different points along the imaginative spectrum

5. Orders of Representation

That the involvement of both the reproductive imagination and productive imagination is necessary for such representative efforts should not surprise. The degree to which these functions of the imagination are involved is a different matter. In a now infamous example,

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[30] (Horstmann, 2018:21). I accept Horstmann's contention that Kant holds the imagination responsible for syntheses on the non-conceptual (sensibility) and conceptual level (understanding) alike. Put differently, we can distinguish two levels in the action of the imagination: the *lower-level* syntheses found perception, involving non-conceptual content and episodic memory ; and the *higher-level* syntheses found concepts, judgments, and semantic memory.

[31] Note that this picture is controversial. According to McDowell (1996:59), in *The Varieties of Reference* Gareth Evans tried to enforce a distance between the conceptual on one hand and the world's impact on the senses on the other, a move McDowell rejects. I do not see the problem here, because the distance one speaks about is merely virtual in the sense that it is suggested by the models one uses to think about the mind and cognition.

Kant offers the thought experiment of a "savage" confronted with a house. That person sees the house, but it is for him a "blind intuition".[32] In absence of the concept "house" under which to subsume it, a process of reflection or abductive reasoning must shed light on what "that object over there" actually is, does or can do. That the intuition is blind does not mean that it is useless or uninformative. It does contain sensible content, after all. However, the inclusion of this content into a rational structure is hampered by the absence of any further understanding.

In representing the house, the observer can represent it on different levels, in an ascending order of complexity. At its most basic, observation can yield judgments of the type "I don't know whether it is man-made"; "it is square"; "it is grey"; "it contains stones" etc. At the next level, more developed judgments can lead to further conclusions and inferences "it is dry in here"; "the holes in the walls let the light in"; "I fit through this hole – it is my size"; Further still, one can decide to imitate the findings "If I build a roof like this, I will stay dry"; "These stones can be stacked to form a wall". At this point, the discrete elements from which the building is made must be named and categorized. Ceilings, walls, windows, etc. must be defined according to their function and their relationships. From this point on, the object ceases to be an object in its primal sense: instead, it becomes a compound of meaningful relationships and elements.[33] In a further step, the characteristics that jointly define a building can be completely or partially represented apart from their physical presence, so that the template can be remembered and reproduced.[34] Further still, the functional and aesthetic (conceptual and non-conceptual) relationship can be represented and implied in abstract patterns or representations such as a symbolic language.[35]

This ascending order of representation combines the non-conceptual and conceptual domains in continuous interaction. Concepts are actively invented, defined and changed. Abductive logic is freely applied to a body of ideas. In this process, one moves from mere "seeing" or "observing," to "seeing-as" or "attending to".[36] Otherwise put, one moves from seeing to *epistemic seeing*—the contents of visual and tactile perception become carriers of more-or-less systematized, concept-based knowledge. In this process, the reproductive and productive imagination play vital roles.

After all, one must imagine a possible state of affairs in which the world is ordered differently, or in which new possibilities come into play. For instance, one can imagine building a second house that is an exact replica of the first, or one can decompose the elements into something new, something that as a whole transcends the concepts one already possesses.[37]

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[32] See (Pereira, 2016) for an extended analysis of this particular passage.

[33] This differentiated process of representation is also described in (Dretske, 1993), using different terminology.

[34] This is especially visible in the drawing of so-called *epures* – a large drawing on which the ground plan of a Gothic cathedral was roughly traced out, and that served as point of reference during the building process. See (Luce 2009) for an extended discussion of this topic. In the Renaissance, the invention of scale drawing by Alberti marked the beginning of many representational practices in architecture that are still used today.

[35] For an architectural theory focusing on different orders of representation, see (Alexander 1964); and for an elaboration of the notion of Epistemic Enactment, see (Paans and Pasel, 2017).

[36] There is a lot to be said about the notion of attention. However, to keep things fairly simple, I won't deal with that particular topic here. But for a promising new line of thinking in this connection, see (Merritt and Valaris, 2017).

[37] To use Daniel Dennett's phrase, any new building that is a variation on the observed one, but that freely plays around with its elements is a *sorta* house. It is so by extending the original concept "house", and freely adapting it, using new elements and configurations. It extends the concept by adding a new instance of more-or-less the same content to the existing category.

What happens in the highest orders of representation is the definition of an expected world: a state of affairs that is coherent, ordered, and to some degree intelligible.

That the aesthetic dimension plays a role here is to be expected: the modes of *logical* and *aesthetic* representation envelop both the non-conceptual and conceptual domains. Correspondingly, they combine the affective and the intellectual domains of cognition. The fact that we regard a house as "cosy" or a palace as "majestic" is a subjective determination, and simultaneously an aesthetic judgment. Yet, these non-conceptual components of a such judgments allow us to communicate a range of experiences that Sartre called "affectivity" (Sartre, 2004:70). Such representational content is conceptually structured, but not completely determined by it. It allows us to see the world not as a series of causal connections but as a coherent unity that is affectively and non-conceptually suffused. It follows that a narrow conceptualism cannot account for its richness.

The interaction between non-conceptual and conceptual contents is a process that is essentially open-ended and—as I discussed earlier—often takes the form of productive argumentation.[38] Like the image of the shifting zones introduced earlier, the fact that there is an expanse "out there" implies that conceptualization could continue or at least unlock new, proto-conceptual domains. Here, the activities of *apprehension* and *synthesis* come in.

Apprehending is ordering "forward" by configuring a multitude of sensory impressions.

Synthesizing proceeds in two stages: first, it connects different representations, and second, it enables one to comprehend their manifoldness in one cognition (A77/B103). Such representations contain both non-conceptual and conceptual content.

This can be illustrated with an example from architectural design: let us suppose that one is conceiving a spatial idea. Let us suppose further that it is an elevated walkway to solve a problem about traffic congestion at a busy crossroads. The idea itself functions like a conglomerate of already established concepts (bridge, traffic stream, walkway, pedestrian), but as a whole it includes material and affective properties. In working out the spatial and atmospheric consequences of this idea, various concepts (composition, texture, construction) must interact with each other and with non-conceptual contents (atmosphere, affective and emotive impact, and how the space "feels" must all be approximated). In providing a series of perceptual properties, the overall idea is grasped as a series of packages of representational content. The contents of these packages are both conceptual and non-conceptual, and they activate each other. And although the packages of representational content are often created by using existing concepts, extending existing concepts ("see, it looks like a…") or inventing new concepts ("horizontal skyscraper"), the idea and its representational contents are not reducible to conceptual content alone. There is always a notoriously hard-to-express excess of representational content involved that can only be allusively or obliquely expressed by imagistic or metaphorical means, or not at all.

This reading of the interplay between apprehension and synthesis enables to broaden Kant's somewhat elitist conception of genius.[39] Instead of being only a competent craftsman, the genius sets a new standard for what constitutes the pinnacle of artistic or scientific practice. Works of genius must be both original and exemplary. If we broaden this narrow conception to account for human creativity in general, we may well interpret the imagination and understanding as two faculties that allow for all kinds of creative action. Thus, creativity is a talent "for which no concept can be provided, or that no rule can teach". Kant seems to regard creativity as a given, a primitive fact about the world that cannot be analysed. However, a few pages later, he does provide an account of the nature of genius, that—if interpreted charitably

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[38] See, e.g., (Paans 2019).

[39] My sincere thanks to Robert Hanna for pointing this out.

and perhaps significantly beyond its original intentions—sheds some light on the interplay between non-conceptual and conceptual contents and thereby also on imaginative synthesis:

> The mental powers, then, whose union (in a certain relation) constitutes genius, are imagination and understanding. Only in the use of the imagination for cognition, the imagination is under the constraint of the understanding and is subject to the limitation of being adequate to its concept; in an aesthetic respect, however, the imagination is free to provide, beyond that concord with the concept, unsought extensive undeveloped material for the understanding, of which the latter took no regard in its concept, but which it applies, not so much objectively, for cognition, as subjectively, for the animation of the cognitive powers, and thus also indirectly to cognitions. (KU, 5:316-317)

The imagination—according to the distinction between *modus logicus* and *modus aestheticus*—works either in conjunction with the understanding, or is otherwise autonomous, animating the cognitive powers and indirectly influencing cognitions. It is hard not to think of Peirce or Collingwood in the passage cited above. The imagination, as a productive faculty, explores the non-conceptual plane to supply sensible material that extends beyond what concepts are able to encapsulate. Moreover, the relation between Peircean abduction and imagination can be cast in the terms that Kant uses: abduction is a "subjective" determination in Kant's terminology (or: one's "instinctual" reasoning in Peirce's terminology) that explores the "unsought extensive undeveloped material" that can be supplied to the understanding.

6. Multiple Apprehension and Progressive Reconstruction

In section 3, I argued that concepts gradually developed via differential repetition, through which their structure is worked out in a stepwise manner. It follows that—leaving aside sudden flashes of insight or creativity—conceptualization is mostly *not* a one-off affair. The imagination and the understanding must cooperate in multiple iterative cycles. Kant draws attention to the fact that the imagination can produce an *aesthetical normal idea* from "a multiple apprehension".[40] In overlaying images, the imagination creates as it were an "average" or "typical" representation for a given class of objects through a dynamic effect (Makkreel, 1994:114–115). If this is possible, it follows that these aesthetic normal ideas can be adapted and can they also develop: the imagination can overlay more or more varied images, thereby changing what is seen as "typical" or "average". Not only does the multiple apprehension enable a subject to recognize a "typical" instant, but it allows for the creating genuinely new ideas as well. The free play of differences out of which the imagination synthesizes new representations creates not only "typical" representations or archetypes, but also singular representations that are not completely reducible to earlier objects.[41]

Such singular representations may be partially reducible to earlier objects, and here there is certainly a role for the reproductive imagination, connecting earlier impressions and memories to new intuitions and new layered apprehensions. Consequently, these earlier impressions play a role in the multiple apprehension. This reading of the Kantian imagination is fully congruent with the idea of developing concepts: the more impressions one gathers, the richer the multiple apprehension becomes. It becomes a "thick representation" – a package of interdependent non-conceptual and conceptual contents. Yet, this multiple apprehension is a first step in generating a new concept. Put in different terms, the reproductive imagination derives non-conceptual (and sometimes conceptual) contents from memory and experience. It

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[40] For a discussion of multiple apprehension in relation to Derrida's notion of *différance*, see (Paans, 2019).

[41] Moreover, eflecting judgment is needed to investigate and position these singular representations. See, e.g., (Paans, 2019) for a discussion of this festure of the Kantian account of imagination

is engaged in a kind of retention, through which representational content is retained, retrieved and ordered. In an *imaginative shift of perspective*, the productive imagination uses this representational content to reason forward, or engage in projective reasoning, or forward-grasping thought (see fig. 3, directly below). The resulting body of representational content develops gradually, crystallizing into a concept.
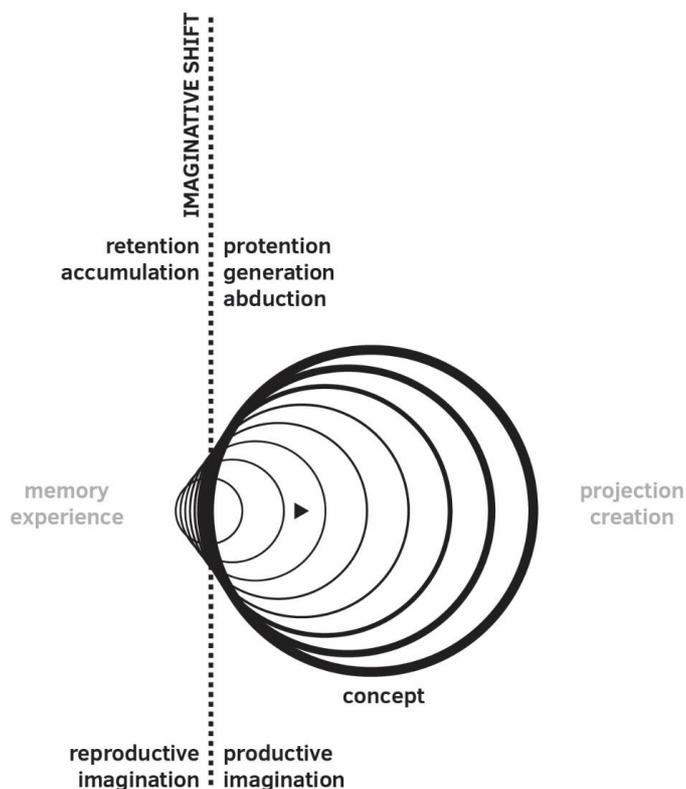

Figure 3: The relations between reproductive/productive imagination, experience and projection, and the imaginative shift

The imaginative shift underlies all orders of representation. It combines both the semantic and episodic imagination, that is, a combination of third-person and first-person perspectives.[42] The example of the house in the preceding section shows a continuous switching between the two perspectives. It is one thing to see the house as an object, but quite another to imagine oneself as inhabiting it. The shifting between semantic and episodic imagination closely corresponds to what, in earlier work, I have called "Epistemic Enactment", which means enacting various perspectives to derive knowledge from and represent knowledge about objects. Epistemic Enactment allows for combining the affective and the cognitive dimensions of objects in a series of representations that combine non-conceptual and conceptual contents (Paans and Pasel, 2017). Through an integrated process of first-person immersion and symbolic representation, moments of insight are generated that jointly accomplish an imaginative shift that can be characterized as *protentive,* or projecting the retained content together with a set of teleological assumptions onto a given context.

I have already alluded to the concept of "epistemic seeing". In imaginative synthesis, a variation on the original idea seems to be operative. By freely combining the past and the present, non-conceptual and conceptual, one must actively construct a representational order

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[42] The distinction between episodic and semantic imagination derives from Tulving's distinction in his (1972) between episodic memory and semantic memory.

that does not yet exist, using imaginative leaps (or abductions) to think protentively. By performing such a series of jumps and productive arguments, a conceptual structure slowly takes shape. Kant suggested already in the first *Critique* that some syntheses (i.e. results from imaginative activity) are "raw and confused" and therefore in need of analysis (A78). In other words: some manifolds become clearer and more coherent on close inspection or repeated reflection.

Therefore, imaginative synthesis is not a simple one-off affair. An initial synthesis may be "raw and confused" but close analysis develops its contents. One may closely attend to the particulars of an idea to see how it works, thereby generating new ideas. In a process of creative oscillation, the specific features of a concept are worked out and brought into relation with one another (Paans, 2020). A case in point is musical composition: by analysing an orchestral score that makes a deep impression, its functional mechanisms and compositional technique may contribute to a deeper conceptual and fine-grained understanding of an initial monolithic impression. This understanding, however, does not diminish the affective impact of the piece— there remains always a non-conceptual surplus. However, a fine-grained conceptual understanding allows one to compose pieces with a comparable affective impact, even while the impact itself cannot be expressed easily or completely.

The same interplay of analysis and synthesis can be observed in the development of concepts. In the case of the DNA example, subsequent cycles of scientific analysis revealed the depths and internal relationships of the initial proto-concept. By uncovering the laws of heredity, the structure of cells, the roles of chromosomes and genes, and finally the proteins from which DNA is built, the early-stage proto-concept that served as a "raw and confused" synthesis gained depth and structure.[43]

We can understand the existence of proto-concepts from a different, yet related angle when we look at artistic practices. A conductor may start to comprehend the concepts and ideas that are expressed in musical structures as her/his career advances. He might initially recognize a Bruckner symphony as a genuine work of art, but s/he may be unable to bring its greatness out while conducting, although he may be in the dark how the work achieves this. Over time, through careful study and reflection, s/he may develop a renewed attitude towards the musical material. Finally, s/he may succeed in expressing a singular vision of the artistic and affective qualities of a score.

In both examples, the understanding of the contents is progressively reconstructed. In a series of abductive leaps, apprehensive actions and modes of representation, an initial package of non-conceptual and conceptual contents is enriched and deepened. Such progressive reconstructive does not occur in a vacuum. Each proto-concept emerges out of an economy of scripts, or exemplary reference points. For instance, both in the sciences and the arts, the discourse revolves around internal points of reference (Knorr, 1977:689). Such references might be exemplary studies, best practices, objects that achieved a canonical status, the methods of famous practitioners, design classics, standard predictive models, fundamental texts etc. Taking such references as formative influences structures and shapes a new concept (Knorr, 1977:683).

In this process of progressive concept (re)construction, non-conceptual content plays a major role. The scrips or internal reference points are not only concepts, but equally atmospheres, affects, emotions and feelings that fall in the category that Hume would describe with *sympathy*: a mental effect that is not characterized by its conceptual character, but its

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[43] The role of technique (*techné*) here must not be underestimated. Both in scientific and in artistic practices, a technique must be mastered before it enables the practitioner to exploit its potential. A piano player must practice scales and etudes; a biologist must master microscopes and experimental techniques; architects must learn to sketch and build models. In many cases, the accurate expression and exploration of an idea demands a necessary minimum of technical competence.

immediate impact that bypasses the understanding (Hume, 1739:318). The same point can be made with regard to the forms of representation that are used in the process of concept construction. These representations serve as *analogons*, i.e., stand-ins for a perceptual state (Sartre, 2004:70). As such, they can be considered as open objects. That is, their representational contents extend beyond the concepts used to explore them.

We can rethink the dialectic between spontaneity and receptivity as a "searching understanding" based on the notions of progressive reconstruction and abduction (Flusser, 1994:58–60). Receptivity is not merely passive, in the sense that it merely receives sensible contents through the senses. It is also the disposition that causes one to *be* receptive or attentive to certain features of a given representation. The experienced scientist who discerns a pattern in a series of experiment results, or the conductor who uncovers a new dimension of a symphony do so due to their receptivity towards the object they study. Spontaneity of understanding latches on to these sensible clues, integrating them in new, explorative actions that combine non-conceptual and conceptual content. This feature of spontaneity is closely linked to abductive or projective reasoning: the imaginative leaps that are being made in exploring the possibilities and relations of an object may be daring, but they are not altogether random or uninformed. They exercise a form of understanding that is rational, but not in Kantian sense of fully conceptual or fully discursive. The idea of abduction accurately describes how the spontaneity of the understanding works in conjunction with the receptivity of the senses.

Sometimes, such spontaneity must be stimulated or directed. Directed estrangement can be a tactic to view an object or idea differently. By changing the means of representation, or by representing something repeatedly, a series of imaginative syntheses is set off, which both receptivity and spontaneity must latch on. Such directed estrangement implies a distance between object and observer, a kind of "zooming out" that re-orders or transfigures materials for the senses, allowing spontaneity to engage in integrating, interpreting and sense-making.

The dialectic of spontaneity and receptivity imaginatively synthesizes concepts via various forms of mental and physical representation. The orders of representation discussed earlier are the source material in which non-conceptual and conceptual contents interact in increasingly complex and intelligible ways. In turn, these interactions lead to the definition of concepts. In the definition of concepts, abductive reasoning or reflecting judgment play important roles.

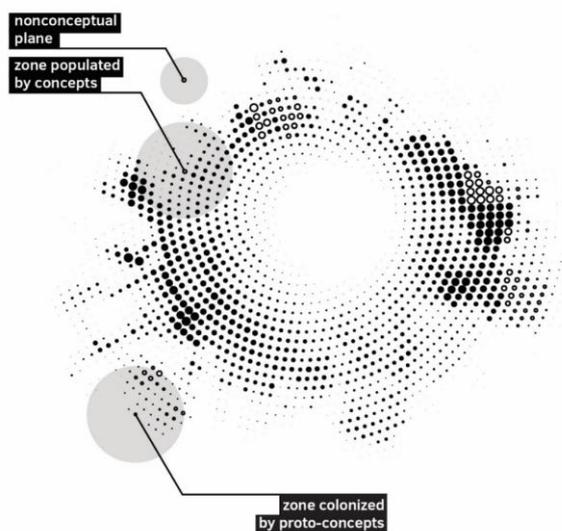By way of conclusion, we can redraw the Garnier-image introduced in section 1—

Figure 4: the conceptual and non-conceptual as two co-extensive zones that are not hermetically closed off from each other, but that are part of an imaginative spectrum.

as two co-extensive domains that analogize the reach and structure of the imaginative spectrum (see fig. 4).[44] Within this spectrum, *concepts* can be regarded as relatively fixed, yet also growing, packages of representational content. Due to their basically stable, yet also continuously enhanced, nature, they fulfil the role of reference points for the creation of other, adjacent concepts. However, the reference points are not completely defined by their conceptual contents: *non-conceptual* contents are an integral part of them. As such, conceptual contents may be regarded as "opening up towards the non-conceptual", implying that the interplay of non-conceptual and conceptual contents is a continuous process. The model visualized here implies also that some areas are more densely "populated" by concepts than others. This is only congruent with for instance the situation in the sciences, were given areas are considered as fundamental and well-understood, while other areas not yet explored.

Further questions that remain at this point are whether the presence of many well-defined concepts determine *how* the non-conceptual is perceived, and what role representation plays in grasping the non-conceptual. Furthermore, it is unknown how many more plausible ways exist in which the conceptual and non-conceptual interact. As I have discussed, the imagination is a crossroads in which spontaneity and receptivity, non-conceptual and conceptual contents, reflection and determination dynamically play out via representational means. This rich environment is itself an expanse of thought worth exploring.

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[44] I would like to acknowledge and credit the artist Starline for the basic artwork used to create fig. 4: see <https://www.freepik.com/free-photos-vectors/background>.

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