

Concept Formation, Synthesis and Judgment:

Kant's Theory of the Logical and Cognitive Activities of the Mind

Ulrich Schlösser (University of Toronto)

1. Kant's Logic as a Theory of the 'Actions of the Understanding'

In the 20th century, Kant's way of interrelating theory of cognition with metaphysics was considered as a particularly promising part of his philosophy. According to the Kantian approach, we take up a reflective attitude and refer to our own cognitive apparatus – we refer in particular to space and time as forms of intuition and to the categories. On this ground, one can argue for the following: No available object of reference can ever have features that contradict the constraints of this very apparatus. The considerations on logic and semantics underlying this project, in sharp contrast, were generally considered to be of no more than historical interest. There seemed to be no way of modernizing logic and semantics based on Kant's own presentation of them. The reason for this widespread assessment is not only the fact that the traditional logic we find in Kant is considered to be a less powerful tool than the system of mathematical logic after Frege. For, at least parts of Kant's presentation seem to attribute a different status to the logical sphere than we do nowadays. This status is entirely unfamiliar to us: The central topic of logic is the 'actions' of the understanding and their principles.¹ Since we are dealing with actions, we can highlight the unfamiliar status of the logical sphere by drawing on the parallel to ethics. The actions governed by the principles of pure logic correspond to the actions of the pure "holy" will Kant discusses in the second chapter of the *Groundwork of the Metaphysics of Morals* (AA 4, 414). The principles of logic spell out what the understanding does under ideal circumstances, that is, if nothing interferes with its activity. Adding empirically given, psychological limitations such as the limits of our memory or the influence of mere imagination corresponds to adding merely subjective inclinations in the domain of ethics. In the case of logic, one thereby derives what Kant calls "applied logic". In relation to applied logic, pure logic acquires a normative status (see B78/A54). Neo-Kantians have argued on the grounds of the pure and normative status of logic that Kant's theory does not fall prey to psychologism.² Nevertheless, it is

¹ On the historical background of this conception of logic, see Reimarus 1756, and also Wolff 1995:22ff. On the Kantian term 'action' (Handlung) more generally, see Gerhardt 1986.

² On the arguments of Windelband, Rickert and Kroner, see Kusch 1994: 64 ff. Husserl 1900/1901: A 26ff. offers a critical discussion of this claim.

still true that Kant's logic makes, at least as a hypothesis, an existence claim, namely the claim that there is an understanding the operations of which are the subject of logic. In contrast, the 20th century, post-psychologistic approach to logic denies that logic makes any existential presuppositions.³ Furthermore, the activities Kantian logic is dealing with are probably to be understood as mental activities. Examples are the acts of subordinating or combining representations, and also the act of positing. However, this may imply that mental acts (such as subordination) and logical relations (such as the subject- and predicate positions) are not distinguished clearly enough. In addition, the following holds: If the operations in question are mental operations, then 'inner' representations – "Vorstellungen" in German – will be the vehicles of logic. As Frege has argued, "Vorstellungen" are private.⁴ It is not possible to compare these representations if they belong to different persons; nor is it possible that different persons exchange these representations. On the other hand, Kant does not introduce explicitly Fregean "senses"⁵ which would not be identical with either psychological states or physical objects.

How can the philosophically minded reader of Kant respond to these concerns? Is it recommendable to cut Kant's considerations on logic and semantics out of his project of combining metaphysics and the theory of cognition? Should we replace these considerations with more viable contemporary theorems on logic and semantics?

A brief example drawn from Kant's justification of the category concepts illustrates why this cannot be done easily. Most interpreters⁶ agree that the central step of the justification is the following claim: If I have the possibility of ascribing thoughts to myself, then these thoughts must be such that they can (and regularly do) relate to objects in the sphere of appearances (and not just to mere intuitions). However, this step considered in isolation does not tell us anything about the categories. Kant introduces the categories in another, separate step. It is called the "metaphysical deduction" as opposed to the "transcendental deduction". Only the latter deduction deals with the relation between self-consciousness and object reference. In the metaphysical deduction Kant is tying the categories, understood as principles of transforming intuitions into representations of objects, to the principles of logic: "The same understanding, therefore, and indeed by means of the very same actions through which it brings the logical form of a judgment into concepts by means of the analytic unity, also brings by means of the synthetic unity of the manifold in

³ An early version of this claim can be found in Husserl 1900/1901: A69.

⁴ Frege 1918/1993: 43 ff.

⁵ See Frege 1892.

⁶ See, for example, Henrich 1989 and Guyer 1987:133ff.

intuition in general a transcendental content into its representations, on account of which they are called pure concepts of the understanding..." (A79/B105). It is important to note that starting from the empty logical form of judgment no content can be derived. Thus, from the mere logical form one cannot derive the category concepts which determine the structure of the objects we experience. However, this means that the types of actions mentioned in the quotation and the capacity underlying both cases of action must play a crucial role in the overall argument. If this is true, then Kant's deduction depends on his account of logic understood as a theory of the actions of the understanding. Even Kant's argument in the deduction can't be spelled out without his unfamiliar account of logic. Instead of bypassing Kant's account of the 'actions of the understanding' I will try in this paper to assign a constructive role to it. In a preliminary consideration in the second part of the paper I will offer an outline of how self-directed transcendental arguments can help justify Kant's use of his mentalistic vocabulary. In the third part of the paper I want to show that concept formation, judgment and the synthetic integration of perceptions are based on *different* actions of the understanding even though Kant seems to suggest that this is not the case. In the fourth part of the paper I will outline several objections to Kant's account. It has been claimed that Kant's account of concept formation is circular. In addition, it seems as if both concept formation and judgment and judgment and the synthesis of intuition mutually presuppose each other. Starting from concept formation, I try to show in parts 5, 6 and 7 of the paper how Kant's emphasis on the active nature of the understanding contributes to solving these problems.

2. Self-Directed Transcendental Arguments and Kant's Philosophy of Mind

The approach I want to sketch relates to Quassim Cassam's description of self-directed transcendental arguments. "Just as world-directed arguments tell us something about the nature of the world in which our thinking and experience takes place, so self-directed arguments tell us something about the cognitive faculties of the thinking or knowing self. If it is a necessary condition of the possibility of a certain cognitive achievement that our faculties are thus and so, then, given the assumption that the achievement is actual, it follows that our cognitive faculties *are* thus and so."⁷ ⁸ This starting point needs to be

⁷ Quassim Cassam 1999:85.

⁸ Kitcher 1990 follows a similar strategy. Instead of talking of 'cognitive achievements' she uses the term 'cognitive tasks': "...I argue that transcendental psychology analyses cognitive tasks to determine the general specifications for a mind capable of performing those tasks." Capacities can then be spelled out "by showing that any faculty that can perform the task at all must meet certain specifications." (Kitcher 1990:13)

modified for the purpose of the paper: Instead of talking about cognitive faculties, I would like to talk about types of cognitive activities. These are characterized in terms of their functions. Let us suppose that the cognitive achievements consist in the fact that objects are accessible to us in a specific way. The following two examples may illustrate what I have in mind. Both examples yield different cognitive activities:

a. Several coloured surfaces are attached to a wall opposite to a spectator. At face value, they have no aspects in common; even their colour is not entirely identical. Nevertheless, the surfaces can be given to the cognizing subject *as* being coloured in shades of blue. Similarly, my environment may present itself as structured according to basic colours even though no two colours given are literally identical.

b. The objects are accessible to me as going beyond the mere form of individual spatial extents of quality given right now. If the objects were just given in this form, we could only communicate using utterances such as “now, here: white”. Instead, we are dealing with objects as the underlying entities to which we ascribe properties. We take for granted that an object can be re-identified later and, also, that it is possible to pick out the object from another perspective. Objects are accessible as the bearers of a plurality of properties. They are three-dimensional and temporally extended.

The fact that we humans access what is present to us in the ways just described can be contrasted with a minimalistic conception of sense impressions. In the 20th century such a conception has been illustrated by using the model of rays of light hitting the retina.⁹ 18th century theories of sense data talk of atomistic (and nominalistically conceived) sensory impressions present in a sequence of what we nowadays would call a mental film.

Let us suppose we start with a minimalistic conception of this type simply because it is the least demanding conception. Then, the following holds: The richer and more developed access to the sphere of objects is possible only if certain functions of the mind other than those of the minimalistic sensibility are fulfilled. According to Kant, these functions are fulfilled (mostly)¹⁰ by the actions of the understanding.

⁹ See, for example, Quine 1960:31.

¹⁰ This formulation presupposes that Kant’s complex theory of space and time can be considered as spelling out conditions for minimal sensibility as described above. In addition to the understanding and its activities, Kant also relies on the power of imagination which acts in accordance with the understanding (see, for example, B151).

In Kant's own presentation of this reasoning one can find another element I would like to mention: In addition to the function and the individual case of an activity fulfilling this function, there is a rule. The activity has to be informed by this rule; otherwise the activities fulfilling the function would just be arbitrary and could break down at any moment. The activities would not fulfil the function in a systematic and continuous way. Overall, Kant claims: If we humans possess a cognitive achievement, then a certain function of the mind must be fulfilled by our cognitive activities in a well-ordered way; thereby, these activities are specified necessarily by certain rules.

This Kantian strategy can easily be applied to our examples: If the achievement is the capacity to grasp what two surfaces with different shades of colour (thus, *prima facie*, with two different colours) have in common, then there must be an activity which fulfils the corresponding function, that is, the function of providing the general. This is the very same function which also underlies the acquisition and the capacity to master concepts. Thereby, the activity is necessarily directed by the rules of logic applying to this task.

Similarly, suppose the cognitive achievement is to pick out and refer to stable objects in thought. Then, there must be a synthetic activity fulfilling the function of integrating the prior visual information in the relevant way, thus providing unity among representations. At the same time, this activity is specified by the rules of transcendental logic, because they are the rules "without which no object can be thought at all" (B87/A62). "No cognition can contradict it (that is, the transcendental logic as logic of truth – US) without at the same time losing all content." (B87/A62-63) - The last claim is stronger than my argument in favour of a systematic procedure (instead of arbitrariness) suggests. This is the case because the relevant achievement – thinking about stable objects – already demands that the activity cannot fulfil the function other than systematically.

Thus, Kant does not address the issue of the mental and potentially private character of our cognitive activities by re-arranging the relationship between processes in the inner realm and external processes. Neither is it crucial to emphasize that some of the activities also have an external use; this is the case with concept application in linguistic communication. Instead, Kant relies on a modal concept, in particular on the concept of a conditional necessity. If we humans have certain cognitive achievements, then certain functional roles must be fulfilled. This implies that specific rules are effective in relation to our mind. The cognitive activities can then be characterized as the very processes that instantiate these necessary conditions. This way of justifying claims about our cognitive apparatus is still distinct from the core arguments of the first *Critique*, such as the

deduction argument. In the reasoning I suggested here, object reference is taken for granted. The assumption that we refer to objects is understood as a contingent premise without further justification. In contrast, the deduction argument tries to show that object reference is implied in the possibility of ascribing thoughts to oneself.¹¹

Finally, it is worth mentioning that Kant's reference to logical and cognitive activities is not based on introspection – nor does his account just put features forward which also would be available by introspection and thus independently of Kant's own methodological procedure. For, (1) inner sense, too, provides us only with appearances; in addition, he calls the consciousness of our activities frequently weak or dark (e.g. A103-104). (2) Conditions for the possibility of representing need not be part of what is represented. (3) Introspection cannot ground the conditional necessity Kant is looking for. (4) Kant does not describe the activities as we experience them but by characterizing their functional role.

3. Do all acts of the understanding belong to the same type?

Let us suppose that Kant can justify taking up logical and cognitive activities at all; thus let us suppose that the strategy using self-directed transcendental arguments is successful. The obvious next step is to analyze how Kant spells out his model of these activities. The Kantian classification of logic is derived from the 18th century tradition. The classification distinguishes between the acts of concept formation, judging and inferring. I will rely mostly on his account of concept formation and judging. In addition, I will take up the activity of synthetically integrating the manifold of representations on the level of intuitions. This activity is not a topic of the Kantian logic. It is at the centre of his theoretical philosophy. The activity of synthetic integration is meant to allow for the fact that mental representations can represent complex, three-dimensional and temporally extended objects. Since these objects are also the point of relation of our logical states, the activity of synthesizing is tied to our logical activities as well.

¹¹ This difference depends on the claim that a strong, anti-sceptical reading of the deduction can be given. If one gives up this reading, the difference between the self-directed arguments suggested here and the deduction itself is less obvious. (See Guyer's way of defending the deduction against the charge of psychologism in Guyer 1989. In this context it is important to note that by tracing back psychologism to Hume and Tetens, Guyer identifies psychologism with empiricism, thus ignoring the issues of privacy and individualism.)

The first question I would like to address is the following: Are we really entitled to speak of a plurality of logical and cognitive activities? Or is Kant's claim rather that we are ultimately just dealing with one uniform type of an activity of the understanding?

There are different ways in which the three processes emphasized could all belong to one and the same type of activity. The first option is that the same activity of the understanding is processing on different cognitive levels. This could be the case with the activities of synthesis and of judging. The first one operates at the level of intuition whereas the second one relates to concepts, that is, general representations. By claiming that there is just one uniform type of activity Kant would claim the following: The activity of synthetically integrating the visual information I receive in a sequence of perceiving my environment would be the same as the activity involved in judging.

Another option to interpret the claim that there is just one uniform type of activity is the following: The very same activity could be described from two different angles (both related to the same cognitive level). This could be the case with the activities of concept formation and of judging. Looking from one angle, the activity could be described as the process of judging, which consists in attributing a general mark to an object. Looking from the other angle, the process would constitute a representation as a general representation in the first instance. Then, the activity of judging would be identified with the act of forming the concept that partakes in the judgment. This way of spelling out the different options shows that they amount to two different claims. There is evidence for both claims in Kant.

I already mentioned Kant's claim that "the very same actions through which it (the understanding – US) brings the logical form of judgment into concepts" are also effective in establishing "the synthetic unity of the manifold in intuition in general" (B105/A79). In addition, Kant writes in the chapter on "The Logical Use of the Understanding in General": "We can (...) trace all actions of the understanding back to judgment, so that the understanding in general can be represented as a faculty for judging" (B94/A69). This suggests that the other logical actions – namely concept formation and interference – can be spelled out in terms of judgment, which corresponds to the second of the two claims mentioned above. Thus, overall, we would be dealing with one unified type of action: judgment. This would be the key to Kant's philosophy of mind.

However, there are objections to both claims. First, I would like to consider the claim that the very same activity that establishes the logical form of judgment also synthesizes the manifold at the level of intuitions. In this context, it is important to note that the logical

form of judgment is primarily based on the activity of subsuming. Suppose I judge on the ground of the mark that this small, red, insect-like animal has eight legs that it is an arachnid. In this judgment, the concept of a mite (this is the animal we are dealing with) and the concept of arachnid are related by subordination; the generality of the concept 'arachnid' is potentially larger than the generality of 'mite'. This claim can also be formulated in a corresponding way in terms of the marks the judgment represents the object as having. The marks of being insect-like and having eight legs are subordinated to the mark of being an arachnid; according to Kant, marks are subordinated "insofar as one mark is represented in the thing only by means of the other" (AA 9, 59).

When we run through the given material and thereby synthesize our representations, the underlying relations are different. In this case, the representations are at the same level of generality. If one concedes that the term 'mark' can be applied at the level of intuition at all, then we are dealing with coordinated marks. The front and the rear side of the animal would be an example for features of this type.¹² Given the difference one may wonder whether it is indeed the same activity which establishes both relations.¹³¹⁴

Identifying the activity of concept formation with judging is similarly problematic. This becomes obvious once Kant introduces the distinction between reflection and determination.¹⁵ Reflection is a logical activity that ascends from the individual to the general. Determination proceeds in the opposite direction, thus applying the general representation either to an object or to the intuition corresponding to it. Like our aesthetic response to the object, concept formation centres on reflection alone. In judging, in turn, the issue of how I want to determine the object is dominant – on this topic, see also section 4b.

Thus, both claims underlying Kant's thesis that there is just one uniform type of the activity of the understanding turned out to be controversial. In the following I will rely on

¹² I assume here that the operation of synthesis as represented in the sections 1-3 of the A-deduction (A 98-A110) is primarily concerned with representing individual objects and the task of tracking their identity through time. For a different reading, see Longuenesse 1998:49.

¹³ A standard reply to this objection is the following: When we synthesize our representations and thereby relate coordinated marks, we also subsume the bundle we have produced under a concept (e.g. the concept of a substance). However, this claim does not establish that the activities in question are identical. That they still may be different can be shown by the following possibility: There may be an empirical judgment which establishes the relationship of subsumption between two concepts without thereby synthesizing the coordinated marks of the underlying object – apart from those represented in the subject concept. Performing the synthesis would be different from this particular act of judging. Therefore, both activities can still be distinct even if they turn out to be correlated.

¹⁴ A negative reply to this question obviously affects the success of the "metaphysical deduction": Is the claim that merely the same faculty and its norms (and not also the same actions) operate both at the intuitive level and the judgmental level still sufficient to introduce the transcendental content and thus the categories?

¹⁵ AA 20, 211 and AA 5, 179.

the assumption that there is a plurality of correlated activities, since this is the weaker claim.

4. Five Challenges for Kant's Model of Concept Formation, Judgment and Synthesis

In the next step I want to look more closely at the Kantian descriptions of the activities in question. I want to point out that there are internal problems in how, according to Kant, the activities are supposed to accomplish their task. In addition, there are tensions in Kant's description of the relationship between different activities.

Overall, I want to point out five problems for Kant's theory. Since Kant's account of concepts plays a crucial role in formulating these problems I will begin by analysing this account. The *Jäsche-Logic* explains the activity of concept formation in the following way:

“To make concepts out of representations one must be able *to compare, to reflect* and *to abstract*, for these three logical operations of the understanding are essential and universal conditions for generation of every concept whatsoever. I see, e.g., a spruce, a willow and a linden. By first comparing these objects with one another I note that they are different from another in regard to the trunk, the branches and the leaves, etc.; but next I reflect on that which they have in common among themselves, trunk, branches and leaves themselves, and I abstract from the quantity, the figure, etc., of these; thus I acquire a concept of a tree.” (AA 9, 94)

Hannah Ginsborg¹⁶ has outlined two internal problems in Kant's account of concept formation.

The first (1) objection is dealing with what is often considered to be the standard case of concept formation: We start with a given plurality of internally complex objects of everyday life. The willow, the spruce and the linden mentioned in the *Jäsche-Logic* fall under this category. An effort to explain how concept formation proceeds from this starting point faces the following crucial question: What accounts for the fact that we take up this particular set of marks in order to form the concept rather than another set of marks the objects also have in common? The issue of which marks we take up affects the

¹⁶ Ginsborg 2006:39ff. See also Pippin 1982:112ff.

application of the concept in the future. If we choose a different set of marks, different applications in future may turn out to be correct, even though both sets of marks are present in the examples given right now. Why do we refer to leaves, branches and the trunk, but ignore for example the size, which could potentially exclude small Japanese Bonsai trees? Why do we abstract from the wooden material that trees have in common with other objects, including artefacts made of plants? Why don't we include the ivy growing on the tree or the surrounding earth it is growing in? Apparently a given object does not fix the relevant concept that allows the classification of other objects as being of the same type. If one object cannot establish what the relevant concept is, a plurality of objects cannot establish this either.

A straightforward response to this difficulty is to claim that in seeing the linden, the spruce and the willow I see them as trees. However, this response seems to imply that the concept of a tree is already in some way available to me.

According to the second (2) objection the following holds: I can form the concept of a tree on the basis of the marks having leaves, having branches and having a trunk only if I have the capacity to recognize leaves, branches and trunks as common features even though they differ in each case considerably in their shape, colour and so forth. Thus I have to grasp these diverging features as leaves, branches und the trunk. In order to do so, I must already be in possession of the concept of these features. If this is true, the Kantian model could only explain how I form a new concept if I already possess some other relevant concepts. The model could not explain how we manage to generate (empirical) concepts at all.¹⁷

In addition to these internal problems in Kant's theory of concept formation, there is also a considerable tension between this theory on the one hand and, on the other hand, Kant's description of judgments and the role concepts are meant to play in judgments. The following question (3) arises: How can the theory of concept formation I have sketched be related to Kant's more modern claim in the *Critique of Pure Reason* that concepts are

¹⁷ Ginsborg's own approach to solve these problems relates to Hume. According to Hume, concepts are based on our having the capacity to call objects to mind which are similar to those that I represent right now (Ginsborg 2006:44ff.). Unlike Hume, Ginsborg suggests that we take our modes of association as having normative significance (Ginsborg 2006:51). In this context, she introduces the idea of a primitive normativity. Her approach seems to imply that all the rules governing concepts acquire the status of primitive normativity. In the following, I will suggest a reading which attributes primitive normativity only to the rules of rationality. Discussing Ginsborg's highly innovative approach in detail is beyond the scope of this paper. Doing so would demand a sketch of her reading of the *Critique of Judgment* as well.

always “predicates of possible judgments” (B94/A69)? This claim suggests that Kant could be read as a forerunner of Frege and the primacy of judgments over concepts Frege argues for. Kant’s identification of concepts with predicates of possible judgments seems to suggest that a representation qualifies as a concept only insofar as it does play this role, that is, only if it enters in a combination of representations which includes a relationship of subordination. If this claim implies that the concept in its role as a predicate always already relates to another concept (namely the concept at the subject position), then a genuine ascent to the sphere of thought does not exist. The ‘modernist’ strand in Kant’s theory could be paraphrased as follows: Insofar as we are dealing with a cognitively responsible subject, the propositional level has always already been realized. It is impossible to step behind this point of view even in hypothetical considerations. – A possible weaker position is to claim that there is an ascent to the sphere of thought, but the ascent only takes place in judgment. This claim still implies that there is no separate theory of concept formation as the *Jäsche-Logic* suggests.

(4) The question arises of how exactly concepts are correlated to the synthesis underlying intuition. According to Kant, this synthesis plays a crucial role in the explanation of how intuitions are intentionally directed to objects. The question does not concern primarily the well-known relation between category concepts and synthesis. Rather, the focus is on empirical concepts such as the concept of a tree in Kant’s example. On the one hand, Kant’s description of how we generate an empirical concept seems to presuppose that we already refer to objects given in a well-ordered way – for example to the spruce, the linden and the willow, or to three arachnids. If the description presupposes reference to these objects, then it also presupposes the synthesis involved in representing these objects. On the other hand one may wonder whether the synthesis can yield the representation of objects which are both stable and have clearly delineated empirical boundaries if one does not take for granted that the empirical concepts are already available; it seems as if the empirical concepts already have to be applied in the synthesis. Once again, considering the role of the concepts in the genetic process reveals a circularity problem.

Finally, there is a fifth (5) critical question. This question refers to the relationship between judgment and synthesis. According to Kant, judgment and synthesis are also interlocking. In order to understand the fifth question one has to bear in mind that an essential feature of judgment is articulating a relation to objectivity. Judgment therefore is

distinct from a way of combining representations which merely articulates a subjective impression of how something appears to me individually: “That is the aim of the copula *is* in them: to distinguish the objective unity of given representations from the subjective.” (B141-142) Kant’s standard example is the sentence: the body is heavy. As is well known to readers of Kant, the reference to objectivity articulated in a judgment is grounded on the synthesis of intuition, insofar as this synthesis itself is tied to the unity of apperception as a source of objectivity. Judgments are then “nothing other than the way to bring given cognitions to the *objective* unity of apperception.” (B141) But is it conceivable that the relation to the objective sphere provided by the synthesis has to be established in each case of judgment? Do I perform the synthesis by judging? This question is particularly important if one takes the presentation of judgment in the *Jäsche-Logic* into consideration as well. According to the *Jäsche-Logic*, a judgment primarily maps a specific combination of concepts – it is a “representation of a relation among them” (AA 9, 101). However, we know already that the concepts which are supposed to be combined in a judgment presuppose an underlying synthesis. Thus it is impossible that the synthesis is established by the judgment in the first place, as Kant seems to claim.

The five critical worries provide reasons for focusing on Kant’s theory of concepts despite Kant’s own emphasis on the primacy of judgment among the logical and cognitive activities. For all the problems mentioned relate primarily to the role of concepts and to their generation. Thus in the following, I will pursue the unusual strategy of reconstructing Kant’s account of the activities of the mind starting from the issue of concept formation.

5. What fixes which marks we must select in order to form the relevant concept? Several efforts to solve the first problem

a. Longuenesse’s reference to schemata as mediating between concepts and perception

I will begin by discussing two prominent efforts to solve the first problem. Béatrice Longuenesse’s effort is the most well known.¹⁸ It has been frequently discussed. According to Longuenesse, the comparison at the beginning of concept formation cannot be a comparison of perceptions, that is, a comparison of representations which represent individuals. Of course, a comparison of perceptions is possible. However, Longuenesse

¹⁸ Longuenesse 1998:107ff.

argues that it cannot lead us to the level of determinate concepts. The comparison in question cannot be a comparison of concepts either, even though this procedure is also familiar to Kant. In the process of thought, a comparison of concepts precedes the endorsement of a judgment and thus the formation of a belief. In order to understand concept formation, an intermediate level, a level between mere perception and concepts, is needed. Within the Kantian apparatus, Longuenesse identifies this level with the level of schemata.

This approach has been criticized from different directions. One important problem has been pointed out by Hannah Ginsborg.¹⁹ It seems as if Longuenesse ultimately has to accept the claim that schemata can only be schemata insofar as we compare them, whereby the very objects of the comparison are nothing other than the schemata themselves. Therefore, Longuenesse's solution to the first problem is itself circular. I want to focus on a more basic question. I want to find out what the reference to schemata involves and in what sense schemata can be objects of comparison at all.

First, a preliminary remark: Compared to Kant's own presentation of the topic, Longuenesse has to turn around the role schemata play as the middle ground between concepts and the perceptual access to an individual. Kant takes for granted that we already possess the concept. Given this starting point, schemata are conceived of as a representation of the procedure whereby an intuition is assigned to the merely intellectual concept (see B179-180/A140). Longuenesse, in contrast, has to assume that schemata can generally be available even without the relevant concept. The function they are meant to fulfil points precisely in the opposite direction. Schemata are supposed to contribute to forming a concept in the first place, given that we have information available at the level of intuition. At the same time Longuenesse agrees with the Kantian claim that schemata cannot be located at the level of mere sensibility. One may wonder whether the intermediate position of schemata is even possible if we do not already possess the relevant concept.

In addition, schemata cannot reasonably be conceived of as entities which are general just in the same way as concepts are general. According to this approach, the only difference between schemata and concepts would be that schemata are immediately involved in perception. By focusing on the role Kant attributes to the schemata one can see why this approach must be wrong. Suppose, we follow the top-down direction as Kant himself does. Then, a line of thought becomes salient that is similar to Kant's reasoning about the

¹⁹ Ginsborg 2006:41.

power of judgment in the passage preceding the schematism chapter (B171/A132-B172/A133). Suppose applying a concept or providing an image in intuition for it would again demand a mental item of a similar type as the concept. Then the gap between a general representation and its image would open up again; this time as a gap between the schema and the instance that it is supposed to provide. The heterogeneity of the intellectual and its exhibition would still be present. The heterogeneity causes the problem, not the schemata's status of being either implicit or explicit. In Kant there is a tendency to cover up this problem (as opposed to solving it). This is the case when Kant calls a schema "a representation of a general procedure of the imagination for providing a concept with its image". (B179-180/A140). Certainly, the relation between the represented procedure in its generality and an individual case of its application is an issue here.²⁰ On the other hand, schemata cannot be conceived of as sample images either. If we go back to the case of the tree, a sample image would be a standardized image of a tree in which all the specific aspects of willows, spruces and lindens would have been dropped. This, however, would still be an image of an individual tree – an image of a boring tree which probably does not exist in reality.

Due to its two-fold difference to both the concept and the image, the schema is a procedure (or a representation of a procedure) which cannot be reduced to any particular content of either thought or perception. The implicit character follows as a conclusion from this reasoning. This is why Kant calls the "schematism of the understanding" "a hidden art in the depth of the human soul, whose operations we will hardly ever divine from nature and lay before our eyes." (B180-181/A141) Once again Kant is drawing on the parallel to the power of judgment for the exercise of which no general rule can be given.

Understood this way, it is doubtful whether schemata can reasonably be considered as objects of comparison at all as Longuenesse suggests. This is particularly doubtful given the fact that the concepts corresponding to these schemata are not yet supposed to be available.²¹

²⁰ The same criticism applies to Johannes Haag's interpretation of schemata. According to Haag, schemata of empirical concepts are again concepts. See Haag 2007:287.

²¹ I read the central evidence in favour of Longuenesse's approach in a different way than she does. It is reflection 2880: "We compare only what is universal in the rule of our apprehension. For example, one sees a sapling, so one has the representation of a tree; an elongated rectangle makes one think of a square (gibt Anlaß zum Quadrat). A unicorn is a horse, where the horn has been taken from other animals." (AA 16, 557) It is helpful to relate this passage to other reflections nearby in order to understand its purpose better. In an amendment to reflection 2876 (AA 16, 556), Kant raises the following question: "(is it possible to possess a concept as *repraesentationem communem* prior to and without comparison with others?" His answer to the question is "Comparison is not always necessary in order to get a general concept, but instead the consciousness

b. Are we always already at the conceptual level? Sebastian Rödl's interpretation of concept formation as an example of a propositionalist reading

Our reasoning about the issue of concept formation started from the following observation: Suppose three individual objects, e.g. a spruce, a linden and a willow are given to us. In this situation, it is not at all obvious how it happens that we generate this particular concept (tree) rather than another concept – a concept that would structure the present and future input in a different way. In addition, the previous step of the reasoning has revealed that introducing schemata as mediating between intuitive and conceptual levels does not solve the problem. Claiming that we cannot step behind the conceptual level at all becomes more appealing given the negative results so far. This claim can be based on Kant's well known thesis that cognition always has two sources, it is always also conceptual. As Kant famously puts it: Intuitions without concepts are blind. (B75/A51) It is important to note that the Kantian slogan can be related to the problem of concept formation in general only if the slogan is meant to include empirical concepts as well. In consequence, one has to accept a very ambitious reading of Kant's thesis: According to this reading, we can access objects via intuitions only if we already possess and apply the relevant empirical concepts (and not just category concepts). Accepting this approach means accepting that there is no genuine ascent from mere intuitions to the conceptual sphere. The three activities of comparing, reflecting and abstracting thus have to be tied to what Kant calls the use of concepts. The use of concepts takes place in judgments. Therefore the interpreter's task is to read judging in such a way that the actions of concept formation can be identified within the process of judging. Sebastian Rödl is among those interpreters who endorse the strategy just sketched. I take up his reading of reflection as a crucial example:

that the representation is possible in various ways." A straightforward way to account for this possibility is the following: Given one representation, we can access another representation nearby in the realm of possibilities by means of association. This association can provide us with a starting point for concept formation if the association proceeds in such a way that a mark present in the given representation is also taken to be present in the representation we associate with it: 'For example, one sees a sapling, so one has the representation of a tree; an elongated rectangle makes one think of a square. A unicorn is a horse, where the horn has been taken from other animals'. The "rule" Kant is talking about is the rule governing the process of association; what is "general in the rule" is the very feature the association transmits from one representation to the other. The procedure of association is merely part of the psychology involved in the theory of concept formation. However, this psychological process should not be confused with the necessary operations of synthesis, as Longuenesse does.

“According to Kant “general representation” means “reflected representation”. Thus, I start with reflecting. In reflecting I look at a spruce in respect of what it has in common with a linden, a willow and other trees. This means I take the spruce to be a tree. I can make this explicit in judging “The spruce is a tree”.”²²

However, it is doubtful whether the judgment mentioned by Rödl can be read as primarily expressing reflection in the Kantian sense. One should bear in mind that the concept of reflection as a part of Kant’s theory of concept formation ought to be compatible with Kant’s comments on reflection in the *Critique of Judgment*. In the *Critique of Judgment* Kant distinguishes the activity of reflection from the opposing movement of determination. Kant characterizes reflecting by using the following formulations: “we reflect on a given representation, according to a certain principle, in relation to a concept which is thereby made *possible* (Italics US).” (AA 20, 211) According to Kant, the principle of reflection is the claim that “for all things in nature empirical concepts can be *found*... (Italics US)”. (AA 20, 211) Determination, in contrast, starts from an “underlying concept” (AA 20, 211). According to the most prominent descriptions (e.g. AA 5, 179) it proceeds top-down, that is, in the opposite direction, and aims at the object or the intuition corresponding to it.²³

Kant emphasizes that it is only in the case of the concept of nature that reflection already implies determination (AA 20, 212). This holds because the concept of nature constitutes the corresponding area of investigation; therefore, it has always already been applied. In all other cases, the activity of reflection which is directed towards a “possible” concept, or a concept that can be ‘found’, does not yet include the performance of determination. The sample judgment in the quotation from Sebastian Rödl stands primarily for the application of a concept and thus for the process of determination: The concept tree is applied to a spruce. The activity of reflection seems to be both presupposed and by-passed. The judgment “the spruce is a tree” is certainly not a good starting point for making explicit what reflection is.²⁴

²² Rödl 2001:433.

²³ On the ambivalences in Kant’s use of the term ‘determination’, see Allison 2001:18-19.

²⁴ For similar reasons I also hesitate to endorse Rödl’s account of abstraction and comparison. Since Rödl wants to take into account that in concept formation we perform a transition, he presents abstraction and comparison as syllogisms. His example for abstraction is the following: “(1) The spruce is a tree. (2) Trees have a trunk. (C) The spruce has a trunk.” (Rödl 2001:433) Once again, the dominant focus seems to be on the determination, in particular on the rule “What belongs to or contradicts a higher concept also belongs to or contradicts all lower concepts that are contained under those higher ones.” (AA 9, 98) Again, this does not seem to be abstraction, because abstraction is concerned with the question which marks the concept ‘tree’ includes. This seems to be presupposed in the syllogism. Comparison is finally rendered as “(1) The linden has a trunk with such and such

c. Kant's solution to the first and the fourth problem: Synthesis prepares concept formation

So far I have reached the following conclusions: Taking up schemata as a means of preparing the formation of general concepts does not solve the first problem on our list. Nor can I claim (as Sebastian Rödl does) that the three operations of comparison, reflection and abstraction are literally the same as our use of concepts in propositions. Thus, I have to go back to the claim that for Kant there is a genuine ascent from the level of mere sensibility to the level of concepts. This means, however, that the original problem is present again – namely the problem of how we can explain selecting the relevant marks without circularity.

This problem can be addressed by taking up the Kantian claim that a cognitive activity is already effective at the underlying level of perception. With the support of the power of imagination, the activity is performed by the very same capacity that also grounds the conceptual sphere. The activity, however, can only contribute to solving the puzzle of concept formation if it precedes concept formation. This condition can easily be formulated in Kant's own words: synthesis precedes analysis. Kant states this assumption in a well-known passage from §10 of the *Critique of Pure Reason*:

“Prior to all analysis of our representations these must first be given, and no concept can arise analytically as far as *the content is concerned*. The synthesis of the manifold, however, (whether it be given empirically or a priori) first brings forth a cognition, which to be sure may initially still be raw and confused, and thus in need of analysis; yet the synthesis alone is that which properly collects the elements for cognitions and unifies them into a certain content...” (B103/A77)

Thus, concepts can arise analytically as far as their form, that is, insofar as their generality is concerned, whereas it is impossible that they can arise analytically with respect to their content. The synthesis is the very procedure which “collects the elements for cognitions”.

The *Metaphysics Mrongrovius* adds to this observation: “From pure sensations one cannot

characteristics, (2) The spruce has a trunk with such and such characteristics, (3) The willow has a trunk with such and such characteristics, (C) Trees have a trunk.” (Rödl 2001:434) However, it is hard to see how comparison as focusing on both what objects have in common and on their difference could be rendered as a syllogism. Rödl's second syllogism rather seems to stand for abstraction (if it can be related to one of the three activities at all).

make any concepts or communicate them to others (...) But one can make concepts from the synthesis of perception.” (AA 29, 794).²⁵

This claim leads directly to the fourth problem mentioned on the list: Can the synthetic activity establish sufficiently stable and clearly delineated boundaries in the realm of objects without presupposing empirical concepts? Is an activity (implicitly) directed solely by the category concepts in a position to determine, which *empirical* marks belong to each other? In other words: Does the synthetic activity have a sufficient selective power in order to allow for a representation of distinct empirical objects? I will outline why an affirmative answer to these questions is plausible.

First one has to bear in mind that we are dealing with a synthetic activity guided by the concept of an object in its relation to figurations in space and time. If the cognitions in question represent the object in this way, the following must be true: “insofar as they are to relate to an object our cognitions must also necessarily agree with each other in relation to it, i.e., they must have that unity that constitutes the concept of an object.”(A104/A105) Thus, cognition will represent objects as having marks which – once we have conceptualized the marks – cannot yield contradictory judgments. However, this is just a minimal condition. In addition, the demand of unification relates particularly to space and spatial features. Therefore, the understanding is directed towards objects which are unified in space. These are objects which occupy an enclosed spatial area. They can be composed as having sides which connect to each other. In our access to the world we will not give priority to the referents of what we nowadays call mass terms²⁶ nor to objects which are discontinuous in space (or in time) and therefore disparate. Finally, we have to take into account that the understanding will follow a pattern in its procedure of establishing unity that fulfils basic norms of (economic) rationality.²⁷ The understanding is *defined* as the rational capacity. This aspect of the meaning of ‘understanding’ is obvious in the corresponding German term ‘Verstand’. The constraints of rationality in question do not primarily apply to one isolated instance of perceiving one’s environment. The constraints

²⁵ In this context one has to bear in mind that the synthesis is closely related to the category concepts. In consequence, my approach implies that category concepts differ from empirical concepts both in status and in the role they play in the cognitive process. I do not think that this implication causes problems. In particular, I do not think that a claim from the *Jäsche-Logic*, according to which the form of a concept is always produced (AA 9, 93), undermines my approach. Even in the case of synthesis, the activity itself comes first. We have to reflect on this activity in order to form the category concepts as explicitly present representations. On this topic, see B103-104/A78. In addition, the logic *Philippi* claims that the understanding acquires pure concepts “by paying attention to his own procedure on the occasion of experience” (AA 24, 452).

²⁶ A standard example is ‘water’. On mass terms, see Quine 1960:91ff.

²⁷ Economic rationality is understood here as aiming at a mini-max relationship balancing unity and diversity. Its most explicit treatment already relates to a higher level: Economic rationality underlies the possibility of having a network of concepts.

of rationality relate to a sequence of perceptual situations and the repetitions of similarities and correspondences they exhibit. The fact that the constraints of rationality²⁸ already shape our perception is the very feature of perception that lays the ground for concept formation. This is particularly true for the act of comparison involved in concept formation and for our capacity to see what two appearances have in common.²⁹

These minimal assumptions taken together imply that integrating certain specific unities is more likely than others, which in turn informs the process of concept formation. I would like to illustrate this implication by going back to the tree example and the potential discrepancies between ways of integrating. The example was used before in Ginsborg's first objection.³⁰ Focussing on the wooden material would unite what is spatio-temporally discontinuous. We would not be dealing with an object having a unity in space and time, but with an object that consists of an assembly of pieces of wooden material on different locations taken together all at once. However, given our reasoning, this cannot be what I primarily consider to be a unity in perception. A very small tree with its leaves, branches and trunk, on the other hand, would qualify as such a unity. The criterion of economy matters for this example as well. In the case of wooden material highly diverse items would be conceived as a unity. But not integrating our representation of a small tree in the same way as we integrate other perceptions of trees in a sequence of perceiving them would render our perception too disparate despite a high degree of similarity in the input. Both cases violate the principles of (economic) rationality. One can explain in the same way why we do not include the soil the tree is growing in or the ivy surrounding it in what we perceive as the relevant unity when we face a tree. The configuration of trees is not always connected to these features which again concerns the issue of economy. In addition, the soil is not an enclosed body.

These examples show the following: Aiming at a unified object, or – formulated in Kant's own terminology – being guided by the category of substance in relation to space and time does provide the synthetic activity with selective power. The synthetic activity understood this way contributes to structuring empirical objects in perception. The activity allows us to explain why we can perceive something as an enclosed object even if the corresponding

²⁸ The constraints of rationality are meant to respond to a worry about a potential gap that could open up if the reading of the deduction would rely only on category concepts. Stefanie Grüne fills this gap by introducing dark empirical concepts as sharing important features with mechanisms of association (Grüne 2009:232ff.). The advantage of the constraints of rationality is to be found in the fact that they can be traced back directly to the understanding without introducing additional empirical assumptions. Like Grüne, I assume that the mechanism operates recursively in a sequence of applications.

²⁹ Once we have concepts, the principles of rationality guide us by developing the architecture of our conceptual systems. See Kant's comments on the 'principle of reflection' (AA 20, 211 ff.).

³⁰ Ginsborg 2006:38ff.

empirical concept is not yet available for us – as is the case with the savage who sees a house for the first time (see AA 9, 33). If one concedes that the synthesis does play this role, then it follows that all humans operate under the same side constraints. These side constraints are involved in guiding the focus of our attention towards a specific set of marks in a situation of concept formation. There is, of course, still a scope for variation. However, this scope is not bigger than the scope a good theory of concept formation wants to preserve – after all, different people do to a certain extent generate different concepts in corresponding situations.³¹

6. Ascending from the Individual to the General

Let us suppose that synthetic activity can provide representations of enclosed objects by proceeding in a way that conforms to the category concepts. Within the process of representing, the synthetic activities provide boundaries in drawing these boundaries. This makes plausible why it is likely that in concept formation we all take up this set of properties or distinctions rather than others. However, this reasoning does not contribute to solving the second internal problem of concept formation. Using again the standard example, the problem can be spelled out in the following way: Kant's presentation of the concept 'tree' presupposes that we already possess the sub-concepts 'trunk', 'branches' and 'leaves'. I don't think we can address this problem by emphasizing (1) that only complex concepts are tied to sub-concepts and (2) that there must be a basic level of simple concepts which have to be explained in a different way. For accepting this suggestion implies endorsing a specific model of how we humans actually generate concepts. One would have to claim that starting from childhood we would as a matter of fact proceed from concepts of what is simple to concepts of what is composed. However, this is an implausible empirical claim. It seems more convincing to assume that humans deal from the very beginning primarily with the complex objects of everyday life. They immediately form concepts of these objects. These concepts in turn are themselves internally complex. Kant's focus on synthesis conforms well to this common sense approach.

Thus, the second problem can't be solved by using the concepts 'complex' and 'simple'. Instead, one has to refer directly to the concepts 'individual' and 'general'. In order to do so I would like to make a background assumption explicit: I do not assume that in

³¹ It is important to note that so far I have just explained why certain features are unified as belonging to one object. Thereby, I have not yet explained the generality of the concept.

perception the characteristics of objects are always already given *as* general.³² We do not in each case perceive the characteristics in objects as being general ones, thus from the point of view that they allow for multiple instantiation.

Given this background assumption, Kant's position can be summarized in the following way: The situation is not such that I already have to possess the (empirical) concept in order to be able to see what different objects have in common. It is precisely the other way around: While seeing – or better: while focusing on what several instances have in common - I thereby have acquired the concept. Kant emphasizes this claim in a bold formulation found in the *Metaphysics Mrongrovius*: “A concept *is* the consciousness that the (same) is contained in one representation as in another...” (Italics US, AA 29, 888). Once I possess the concept, the mark of the object presents itself to me *as* general. (However, it is important to note that my gaze is not always focused on correspondences among objects.)

Thus, Kant tries to offer a very simple solution to the second problem of concept formation. One may wonder whether the solution is actually not too simple. After all, there are two different paradigmatic situations even if we are just dealing with simple features such as colours. In the first setting, there is a plurality of surfaces in my visual field, e.g. on a wall opposite to me that I am looking at; they are all coloured in the same shade of red. The surfaces have a different location and may also differ in shape. In the second setting we see the same surfaces in terms of their spatial properties, but all of them are coloured in different shades of red. In the first case, it is easy to tell what the different instances have in common – and thus, what the representation of this common aspect will be like and how we generate it. While we are comparing, we have to attend to the colour and the shade and neglect the spatial positions and the shapes of the surface. Each of the different surfaces has individual, spatio-temporal marks. Despite the individuality of the marks, there can nevertheless be an identity in terms of shade. In the second case, however, it is not obvious how one would proceed, since *prima facie* we are dealing with surfaces which do not literally correspond to each other under any perspective, not even in their precise colour. This problem can also be spelled out by referring to the process of abstraction: It is insufficient just to know what it is we are abstracting from. We also need to know towards what the abstraction is leading us. In the second case, the latter is not

³² This implies (1) that Kant's theory allows for intuitive marks. On this matter, see Reflektion 2286 (AA 16, 299) and the logic lectures Dohna-Wundtacken (AA 24, 725) and Busolt (AA 24, 634). See also Stuhlmann-Laeisz 1976: 73, 89, 93, Wolff 1995:66, Houston Smit: 2000 and Grüne 2009:68. (2) My claim implies that the intuitively given marks are not again general or discursive. In this respect, I follow Grüne 2009:66 against Haag 2007:166.

present anywhere in the surfaces that are given to us. But does this not mean that we already have to presuppose the concept, because the individual instances – the different shades on the surfaces – do not fix where the process of abstraction is heading to?

Kant's approach to addressing this issue is similar to his effort at solving the first problem of concept formation by referring to the process of synthesis. Once again, the active determination of the understanding is the key to the solution. What it is we pay attention to in comparing and reflecting and what it is that we thereby neglect (such as the differences in the shades of colour) creates a common feature from our point of view. This common feature would not be present in the merely given material independently from our access to it.³³ Unlike synthesis, the activity involved in our seeing common features does not proceed in a way that is governed all the way down by necessity.³⁴ This would not be desirable anyway, since the conception should allow for variations in how we carve up our concepts. But the activity isn't unregulated or arbitrary either. As an activity of reflection, it is guided by the corresponding principle of reflection: "that for all things in nature empirically determinate *concepts* can be found", as Kant says (AA 20, 211). In addition, the principles of economy always direct us in building a system of concepts. Furthermore, the concepts of identity and similarity must be present in the activity as well – these concepts must be present in reflection in a way that corresponds to the presence of the category concepts in the process of synthesizing intuitions. Kant does not tell us much about this last issue. The Kantian distinction between concepts that are objects of reflection ("reflektierte Begriffe") and concepts involved in the process of reflecting ("reflektierende Begriffe") may indicate that he had concepts such as identity and similarity in mind.³⁵

However, we still have not reached a satisfactory interpretation of Kant's theory of concept formation. Several interrelated concerns still need to be addressed. The first concern relates to Kant's use of the term 'abstract'.³⁶ According to Kant, we do not abstract a representation – the concept. Rather, we abstract from certain marks of the object and keep other marks. Therefore, one representation can be more or less abstract

³³ It is important to note that this approach does not imply that Kant endorses nominalism: Once we have the concept we can recognize universal properties in the object. See also Longuenesse 1998:120: Universals "are revealed in things only by the acts of comparison, reflection and abstraction."

³⁴ This claim does not contradict part 2 of the paper. What is necessary even here is what the general rules of logic demand, that is, that the procedure moves from singular representations to a representation of what different objects can have in common on the ground of economic rationality. However, from this starting point it does not follow that it is necessary which particular concepts humans generate in a given situation.

³⁵ On this distinction, see *Reflektion* 2865 (AA 16, 552).

³⁶ See, for example, AA 9, 95.

than other representations. However, this comparative use of the term ‘abstract’ seems to miss an absolute distinction between abstract and concrete which is present in Frege and post-Fregean philosophy. According to the post-Fregean tradition, thoughts understood as the content of sentences, and the concepts that contribute to them are abstract in the absolute sense, whereas spatio-temporal objects and their features are concrete.

The charge of not being able to account for the right meaning of ‘abstract’ is closely related to other critical questions concerning Kant’s theory of concept formation: Why is the product of abstraction also not once again just singular? How can it be more than the result of a function based on just these very specific sample cases (that is, this particular spruce, willow and linden)? If so, how is it possible that this product puts reasonable constraints on the application of the concept in the future? I will briefly sketch three features of the Kantian account which contribute to answering these questions.

1. Let us begin with a background remark: Kant’s conception of concepts should not be read in a one-sided way. The content of the representation produced by means of comparison, reflection and abstraction is from the very beginning also defined by its role in our logical and cognitive activities. Considering the content in isolation, that is, treating it merely as a partly indeterminate product of abstraction, is misleading. The content has been produced as a vehicle that allows for multiple applications. The activity of concept formation is tied to the process of applying the concept in judgments. This relationship can be reformulated using the terminology of the *Critique of Judgment*: Reflection and determination are correlated in such a way that reflection already anticipates the possibility of determination.³⁷ On the other hand, the inverse relation holds as well: I restrict the process of possible determination by binding it to the particular content reflection has produced for this purpose. The content provides me with a guideline that makes the process of determination possible. The key feature of Kant’s theory of concepts I try to highlight here can also be spelled out in a different way: Starting from my sensory experience I may derive some content, but I do not derive the concept of a concept. This concept is based on the structure of our interrelated logical and cognitive activities. The content I have derived fulfils a function within these activities.

2. Consider again the example of the coloured surfaces which differ in the shade of their colour. Consider also that it is part of the use of the representation in question that it could

³⁷ This possibility is expressed in the Kantian claim that reflection provides a concept as a “ground for cognizing the object” (Reflektion 2854, AA 16, 547).

be applied to these different surfaces. Now suppose the mental item I use in my mind has nevertheless still the singular character of an intuition, that is: it is an image. In this case, the image in my mind, which unavoidably would have a specific colour, could not fit precisely to the objects it is applied to. The representation (the image I use) would not be taken literally anymore. Thereby, we come to understand the Kantian claim that the use of concepts is always symbolic. Unlike geometrical drawings, the symbolic realisation of a concept does not mirror the characteristics of the represented object.³⁸ It is this feature of the Kantian theory that allows accounting for theoretical intuitions about the abstractness of concepts.

3. As far as the future applications of concepts are concerned, we find at least some clues as to how Kant could respond to the problems outlined by Wittgenstein.³⁹ Wittgenstein uses the case of a person who, guided by our example, performs the mathematical operation of adding: She successively adds two units given a specific starting point of the operation. Once she has reached the number 1000, she moves on by adding four units. The crucial question is the following: On what grounds can we blame her for having made a mistake? She may simply have been following a different concept. This problem does not just relate to mathematical concepts, but similarly to empirical concepts discussed in this paper.

Prima facie, there is a striking difference between the thought experiment and the Kantian approach: In Wittgenstein's thought experiment we look at the person from the outside, whereas Kant always focuses on the first-person point of view. From my point of view it cannot be indeterminate which marks belong to a concept because I myself have made the concept. A change in procedure in applying the concept would have to be grounded in the marks that constitute the concept.

In Kripke's presentation of Wittgenstein's problem, however, the thought experiment is not formulated anymore from an external point of view and still the problem seems to arise. Kripke, too, starts from the first-person perspective⁴⁰ and reasons in the following way: Even in my own case, there are no facts of the matter in the past which determine which way of continuing corresponds to the previous procedure. The previous procedure

³⁸ This distinction is already present in AA 2, 291-292.

³⁹ Wittgenstein 1984:336ff. (that is, §§185ff. of the *Philosophical Investigations*). On this problem, see also Ginsborg 2011.

⁴⁰ See Kripke 1982:8ff.

of applying the concept would be compatible with different ways of continuing since. Previous uses do not fix which procedure is correct in the future.

For Kant, the issue of which features I paid attention to⁴¹ while forming the concept and of which marks I thereby included in the concept are themselves facts of the matter which are present right now. They inform my applications of the concept because I meant them to do so. In order to understand the role of the concept Kant has in mind I would like to draw a double contrast – a contrast that is more striking if we focus again on empirical concepts rather than mathematical ones: According to Kant, the future application of a concept cannot just proceed mechanically. But it is also not true that in applying the concept I retrospectively constitute a determination of the concept which had been left indeterminate before. For each application of the concept we need both a general content (characterized by marks) and the genuine power of judgment. Our power of judgment is bound to the content as its rule. However, since the content is general, applying it to various cases always demands additional, substantial considerations. How to proceed is not an entirely open question as the sceptical reasoning suggests.

There is another side constraint which is relevant for how Kant could address the Wittgenstein-Kripke problem. As I have mentioned before, both the idea of synthesis and the principle of reflection introduce demands of economic rationality. These demands restrict the person both in forming and in applying concepts. This issue leads back to the intersubjective case. Only if the demands of rationality are present in the background mutual expectations are justified. If I, as the teacher, would have meant that the other person should change her behaviour above 1000 (a threshold I haven't reached), then this would not have been communicable; nor would the person have any ground to rationally grasp my expectation.

7. Concept, Judgment and Synthesis

In a final, seventh step I would like to address briefly the relationship between concepts and judgments – as is well known, judgments are at the centre of Kant's own presentation of his theory. The previous step has already revealed that successful concept formation demands the subsequent use of concepts in judgments. I now want to argue that the opposite relation holds, too: The possibility of judgment also depends on the process of concept formation as described in the logic. Against this claim two passages from the

⁴¹ The role of attention becomes more prominent in the contemporary philosophy of mind, too: In his Simon Lectures, John Campbell, for example, classified attention as being part of the 'hard facts of semantics'.

chapter on the “Clue for the Discovery of All Pure Concepts of the Understanding” in the *Critique of Pure Reason* can be put forward: “All intuitions, as sensible, rest on affections, concepts therefore on functions. By a function, however, I understand the unity of the action of ordering different representations under a common one(…).” (B93/A68) In the same paragraph, Kant adds: “We can, however, trace all actions of the understanding back to judgments, so that the *understanding* in general can be represented as a *faculty for judging*.” (B94/A69) Adding the second passage may lead the reader (1) to claim that the activity of subsuming described in the first quotation already qualifies as a rudimentary form of judging. (2) Since the second quotation states that all actions of the understanding can be traced back to judgment, it looks as if a genuine account of concept formation has been given up. Both assumptions together suggest that a representation becomes a concept in the first place if another representation is subsumed under it as the first quotation says. However, this line of reasoning is unconvincing. It is important to note that a representation B can be subsumed under a representation A only if A is already a general representation. Subsuming would be impossible if A is originally just a sensory representation of an individual. Sensory representations of individuals can only be coordinated, they cannot be subordinated. The reflection at the centre of concept formation is therefore still a necessary starting point since it can provide the general representation that is needed.

So far, I have addressed the first, second and fourth objection against Kant’s overall model of the actions of the understanding. In the previous paragraph, I have also responded to the third concern. Thus, in a final section, I would like to comment on the relation between judgment and synthesis. The potential tension in this relationship I have outlined in the fourth part of the paper can be summarized as follows: On the one hand, Kant says that a judgment “is nothing other than the way to bring given cognitions to the *objective* unity of apperception.”(B141) Thereby Kant relates judgment also to the performance of the synthesis of intuitions. This may suggest that the synthetic connections are actualized *by* our judging. On the other hand, it seems as if the very possibility of judgment already presupposes that the synthesis of intuition is effective. The latter seems to be the case for several reasons. One of them is that judgments presuppose concepts. The formation of concepts in turn depends on the performance of a synthesis on the intuitive level as we have seen in part 5. The alleged problem can be solved by giving up the first claim: Unity and order in the given sensory material are not established by means of our judging. The

synthetic connections are necessary and therefore always already effective in relation to all potential content.

I would like to suggest a different reading of the Kantian passage: A logical combination of originally merely subjective states only qualifies as a judgment, that is: as something that transcends the individual person and her subjectivity, if it is bound to the objective unity of apperception and the synthesis underlying it.⁴² Thus the relation to objectivity established by the synthesis explains why judgments and the concepts that partake in them are not merely private even though they are grounded on mental representations. Kant can therefore respond to the Fregean challenge. The claim that our cognitive activities establish a relation to objectivity and thus allow for the communicability of the content of our mental representations is only an apparent paradox.

The complex discussion can be summarized as follows: (1) Kant's emphasis on the active role of the understanding is not itself a problem; for Kant, it is rather a tool to solve several problems surrounding concept formation and judgment. (2) These problems can be solved precisely because we are not dealing with just one type of action, but with a plurality of different activities which interact in an organic way. They contribute to the Kantian image of the purposiveness of our mind. As the cognizing being in question, we can't help assuming that our mind is organized in a purposive way. This assumption, hardly ever spelled out explicitly, is the keystone of Kant's reasoning.⁴³

References

Apart from the *Critique of Pure Reason*, references to Kant are to the volume and page of *Kants gesammelte Schriften*, edited by the Deutsche Akademie der Wissenschaften, 1902ff. I follow mostly, though not always, the translations in the *Cambridge Edition of the Works of Immanuel Kant*.

⁴² According to the terminology of the *Prolegomena*, this merely subjective combination of representations is called 'judgment of perception'. "Empirical judgments, insofar as they have objective validity, are *judgments of experience*; those, however, that are only subjectively valid I call mere *judgments of perception*. The latter do not require a pure concept of the understanding, but only the logical connection of perceptions in a thinking subject." (AA 4, 298). Insofar as the judgments of experience are related to the concepts of the understanding they are also tied to the synthesis. Thereby, the judgments of experience are more than just my subjective states. This universal aspect is captured in the following formulation: "Now this judgment can be of two types: first, when I merely compare the perceptions and conjoin them in a consciousness of my state, or, second, when I conjoin them in a consciousness in general." (AA 4, 300) In the given context, one should bear in mind that it is controversial whether Kant is entitled to call the judgments of perceptions 'judgments' at all. Doing so seems to contradict the account of judgments in §§18-19 of the B deduction.

⁴³ I am grateful to the audience in Berlin and also to Tyson Gofton for his comments on this paper.

- Allison, Henry (2001): *Kant's Theory of Taste* (Cambridge: Cambridge UP)
- Cassam, Quassim (1999): "Self-Directed Transcendental Arguments", in: Stern (1999)
- Frege, Gottlob (1892): "Über Sinn und Bedeutung", in: Frege (1962)
- Frege, Gottlob (1918): "Der Gedanke", in: Frege (1993)
- Frege, Gottlob (1962): *Funktion, Begriff, Bedeutung* (Göttingen: Vandenhoeck)
- Frege, Gottlob (1993): *Logische Untersuchungen* (Göttingen: Vandenhoeck)
- Förster, Eckart, ed. (1989): *Kant's Transcendental Deductions* (Stanford: Stanford University Press)
- Gerhardt, Volker (1986): "Handlung als ein Verhältnis von Ursache und Wirkung", in: Prauss (1986)
- Gerhardt, Volker/ Horstmann, Rolf-Peter/Schumacher, Ralph (2001): *Kant und die Berliner Aufklärung. Akten des IX. Internationalen Kant-Kongress* (Berlin/New York: De Gruyter)
- Ginsborg, Hannah (2006): "Thinking the Particular as Contained under the Universal", in: Kukla (2006)
- Ginsborg, Hannah (2011): "Primitive Normativity and Scepticism about Rules", *The Journal of Philosophy*, 108 (5)
- Grüne, Stefanie (2009): *Blinde Anschauungen. Die Rolle von Begriffen in Kants Theorie sinnlicher Synthesis*, (Frankfurt: Klostermann)
- Guyer, Paul (1987): *Kant and the Claims of Knowledge* (Cambridge: Cambridge UP)
- Guyer, Paul (1989): "Psychology and the Transcendental Deduction", in: Förster (1989)
- Haag, Johannes (2007): *Erfahrung und Gegenstand* (Frankfurt: Klostermann)
- Henrich, Dieter (1989): "The Identity of the Subject in the Transcendental Deduction", in: Schaper/Vossenkuhl (1989)
- Husserl, Edmund (1900/1901): *Logische Untersuchungen* (Halle: Niemeyer)
- Kitcher, Patricia (1990): *Kant's Transcendental Psychology* (Oxford: Oxford UP)
- Kripke, Saul (1982): *Wittgenstein on Rules and Private Language* (Oxford: Oxford UP)
- Kukla, Rebecca, ed. (2006): *Aesthetics and Cognition in Kant's Critical Philosophy* (Cambridge: Cambridge UP)

- Kusch, Martin (1995): *Psychologism* (London: Routledge)
- Longuenesse, Béatrice (1998): *Kant and the Capacity to Judge* (Princeton: Princeton University Press)
- Pippin, Robert (1982): *Kant's Theory of Form* (New Haven und London: Yale UP)
- Prauss, Gerold, ed. (1986): *Handlungstheorie und Transzendentalphilosophie* (Frankfurt: Klostermann)
- Quine, W.V.O. (1960): *Word and Object* (Cambridge, Mass.: Harvard UP)
- Quine, W.V.O. (1974): *The Roots of Reference* (LaSalle: Open Court)
- Reimarus, Hermann Samuel (1756): *Vernunftlehre* (Nachdruck München 1979: Hanser)
- Rödl, Sebastian (2001): "Handlungen, die einen Begriff ausmachen", in: Gerhardt et al. (2001)
- Schaper, E./Vossenkuhl W., eds. (1989): *Reading Kant* (Oxford: Blackwell)
- Smit, Houston (2000): "Kant on Marks and the Immediacy of Intuitions", in: *The Philosophical Review* 9, 102
- Stern, Robert, ed. (1999): *Transcendental Arguments* (Oxford: OUP)
- Stuhlmann-Laeisz, Rainer (1976): *Kants Logik* (Berlin/New York: De Gruyter)
- Wittgenstein, Ludwig (1984/1952): *Philosophische Untersuchungen*, (Frankfurt: Suhrkamp)
- Wolff, Michael (1995): *Die Vollständigkeit der kantischen Urteilstafel* (Frankfurt am Main: Klostermann)

