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TYPES AND HABITS.
HABITS AND THEIR COGNITIVE BACKGROUND IN HUME AND HUSSERL

abstract

The paper begins with a brief characterization of the function of types in the process of perception before discussing their different possible degrees of generality. Some similarities in the function of habits and types are then thematized, similarities based on the fact that each is the compact result of some set of prior experiences. Following these clues, both parallels and important differences between types and concepts are discussed. The second part of the paper investigates the function of types in the perception of concrete objects, the arousal of types in sensibility and the ongoing competition of different types striving for fulfillment. It is shown that the selection, collection, interpretation, and synthesis of sensible elements in perception are guided by the pre-knowledge that is sedimented in types. In the third part some very basic forms of cognition are shown to be based on the use of a type in a new cognitive context. Finally, a close connection is drawn between Hume's investigation of association and habit and Husserl's concept of types.

keywords

Habit, type, perception, cognition, concepts

TYPES AND HABITS

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1. Everyday-Interpretations of Habits and their Cognitive Aspects

We have habits of performing actions, of valuing and perceiving, attending and expecting. They can be modified and they are sometimes overgrown by other habits. Thus if we are speaking of habits – or, as Husserl prefers, *habitualities* - we are dealing with a broad field of very different, lower- and higher-order activities that can occur in different realms of experience[1]. There are trivial habits of acting and behaving, and there are also habits that make up a certain extent of our knowledge. In this regard, it becomes apparent that we have acquired habits of expectation concerning the properties of certain things and kinds of things. For example if we see a lemon, we expect a fruity smell, etc. These expectations reflect a kind of pre-knowledge or familiarity we already have before we are able to perceive the respective object in a full sensible way. And it turns out to be a pre-knowledge that usually does not concern, for instance, this individual lemon alone, but rather concerns, as we say, "objects of this kind", e.g., all lemons. Such habits of expectation, entailing and expressing a pre-knowledge about the kind of object we have in front of us, arise out of experiences we have had either of this individual object or other members of the class of similar objects (objects of this kind).

In his genetic phenomenology, Husserl names this pre-knowledge of an object or class of objects (or events) its "type" (*Typus*)[2]. The function of a type is best seen in the process of perception, which in genetic phenomenology is often termed a "typifying apperception" (i.e. an apperception with the help of a type, *typisierende Apperzeption*). Types are essential for the performance of perception, in each instance functioning through the entire process. The contents of a type rest extensively on the pre-predicative forms of gaining "knowledge" that Husserl consistently tried to differentiate from knowledge in the strict sense, i.e., formulated in predicative judgments, by calling them a kind of acquaintance (*Kenntnis, Bekanntheit*)[3]. The formation of types

1 Concerning habits of actions we can even attempt to change our habits, for example, to quit smoking, and we can try to acquire new habits. If I tend to be halfhearted in public conflicts, I can try to become more courageous. This reveals our ability for self-education and shows that we can be responsible for our habits because they depend partly on my own influence. This is part of the notion of hexis developed by Aristotle. Here I will not discuss this aspect of habits, but concentrate rather on the cognitive aspects of habits.

2 We must observe the difference between a type for a singular object and a type for a group of similar objects. We may speak in the latter case also of a general type. Cf. Lohmar (2013), 147-167.

3 Cf. Husserl (1971), 31-35, 140 f. on the difference between type and concept cf. Husserl (1971), 394-403.

takes place across a multiplicity of perceptions of similar things and events. The result is sedimented in a person's types, with the result that types may differ slightly from person to person.

Everything affecting us, if we apperceive it as an object, is interpreted by us as something-to-be-determined and moreover - already following the pre-knowledge of a special type - as something which we are acquainted with in advance, just as in the case of the lemon we expect that peculiar fruity smell, even if we only see it from a distance. Husserl tries to express this strange form of pre-knowledge in numerous places in the following terms: We apperceive the unknown in terms of the already known[4]. The function of a type, e.g., the type for a dog, is the form of an intentional anticipation revealing for us something not yet directly given of the object, but in a vague mode. (One "knows" ahead of time what a dog's features are like, e.g., its fangs; and the same is true of its behaviour, e.g., its sniffing, barking etc.). The content of these concrete expectations is quite precisely determined but remains flexible and always contains a degree of vagueness, so that the expectations can adjust to an actual sensible perception, for example, by a perspective redrawing of our expectations. Hence, our expectations are revisable, they may be refigured in the course of experience. If I see a student sitting at a desk I expect his legs to be under the table, if he hides behind a bush I expect his legs to be bent, etc.

The degree in the generality of a type varies. There are very general types, like "object" or "living being", which have a very broad extension and a lot of sub-types. The usual case of a perception with the help of a type begins with a very general type, for instance, an extended and real object, and end up with a quite narrow type, like an apple or a rubber band. Starting with the type "living being", I may realize that it is a dog and moreover it is a shepherd's dog, perhaps it is even a dog I know well individually. Even typifying perception of a single object is possible. *Types for singular objects* differ from *general types for objects* in many important aspects, and beside this the reference of single objects to other specific and also individual objects nearby and in a close relation to the first object is characteristic of them. But even types of singular objects still allow one to apperceive a particular object in different modes of givenness. Moreover, such types also entail the series of a singular object's states and some part of its historical development in a sedimented form.

But in typifying apperception things may also unfold in the opposite

4 We always apperceive the known in the mode of the known. Cf. Husserl (1971), 34; Husserl (1976), 126 ff. This general rule is often criticized with the argument that it implies that there could simply be nothing "completely new" in our experience. I do not think so. See Lohmar (2011), 120-134.

direction. That is, starting with the type of a concrete, singular object we may then realize that it is not the individual object I supposed it to be "at first glance": It is not Peter but someone else! Thus I moved on to a more general type that allows for a successful apperception in this case: "someone". The most general type, "something", designates objects insofar as they are substrates of determinations[5]. Yet even this high degree of generality does not give such types the generality of a concept, because a type corresponds to the features shared by a certain group of things with which I have some prior experience. The most general types, like "something", divide themselves into less general types (with narrower extensions) and, ultimately, to types for singular objects, and all of them belong to a "typical totality" (*Totalitätstypik*)[66] entailing the whole horizon of our world.

Habits in a very trivial sense and types for singular objects are closely connected. This will be more obvious based on the following reflection. Singular objects' types do not exclusively concern things' cognitive aspects. They govern, moreover, a significant part of our everyday life and make it much more economic. Because the activities of persons usually are guided by certain ideas, it makes sense that the basis of the organization of life is experience - experience that is incorporated into habits and - as we will see in a moment - into types of singular objects. Habits sometimes appear to be quite conservative and inflexible because they adjust only very slow to changing circumstances. At the same time, exactly this conservative tendency sheds light on an important cognitive aspect of habits guiding our low-level everyday activities, i.e. activities performed without special attention. This often leads to specific uncertainties: Did I turn off the oven just now? Did I lock the door? Sometimes this might be annoying, but it proves that in most cases we are able to perform everyday activities without making their aims explicit in our consciousness, and we usually proceed successful without further control or troubling uncertainty. In this way habits facilitate our everyday practice[7].

Yet the conservatism of habits is only one side of the coin. Our types also change slowly in the further course of experience. Consider an example of this gradual modification of a type's contents that takes place in everyday circumstances. I have the habit of using a certain burner on my stove while making myself coffee, using an old-fashioned Italian style coffee maker in the morning. It happens one day, let's suppose, that the preferred burner

5 Cf. also for the following Husserl (1971), 34 f.

6 Cf. Husserl (1971), 33.

7 There are also habits that can counterbalance the weak side of other habits. For instance, we might start with the habit to control the lock of the door when we leave our home.

stops working, and I, naturally, make up my mind to call for a service man. The next morning, *I behave as usual*, i.e. I follow my habitual routine and put the coffee maker on the customary, but now broken, burner. After some minutes, I realize that it will not start, and in recognizing that the burner is defective yesterday's experience, which I had forgotten, is called to mind again. I may even reprimand myself: You should have known better! It was only yesterday that you discovered the defect! Each of us has experienced similar situations. The important point is that only after a series of similar disappointments do I change my *habits* and avoid the use of the defective burner. This shows that a singular object's *type* not only includes information about the usual way the object will appear, but also contains intentions concerning its *value* and about its *functional qualities*, e.g., the plate is helpful for heating the coffee machine. Now suddenly the latter quality changes and it becomes apparent (upon a little reflection) that my usual orientation in the world is based on a non-linguistic way of preserving my experiences in types of singular objects. This way of preserving experience is quite conservative, but it changes gradually as habits do, in a series of similar experiences. This preservation of "knowledge" in our types gives it a kind of life of its own, since, although in principle my expectations may change, this change is sluggish and conservative.

But let us now come back to the more general characteristics of types and discuss what we know about the emergence and function of types. What we expect while we perceive with the help of a type is always anticipated in a vague generality (*unbestimmt allgemein*) so that we have always a kind of "room of possibilities" (*Spielraum von Möglichkeiten*) where different intuitive fulfilments of, e.g., sensory experience can fulfil the same typical expectation[8]. Different colours can fulfil an expectation about a coloured surface, and different shades of a particular colour, e.g., red, can fulfil the same expectation. This vague indeterminacy of types corresponds the "extension" or the range of objects that can be perceived successfully with this type[9]. With the help of one and the same general type we can apperceive different individual objects.

Besides that, the vagueness or "generality" of a type enables one to expect different modes of presentation of the same object (or objects of this kind), such as the different postures a living being might assume or distortions in the spatial appearance of objects due to perspective. Therefore even an individual object's type has this vagueness and generality

8 Cf. Husserl (1971), 32.

9 Husserl speaks about an „'Um fang' der unbe stimm ten Allgemeinheit der Antizipation", cf. Husserl (1971), 32.

in its expectations, leaving room for their transformation (preserving similarity)[10]. Because of this, no type has an exhaustively determined sense or content. Its flexibility offers a kind of "empty" frame of sense (*leerer Sinnesrahmen*)[11].

Every perception of a previously unknown object (helicopter, bumble bee etc.) starts with a quite general type, and in the explication of the sensible given object the type used becomes more and more determinate, resulting in the constitution of a new special type[12]. Thus the constitution of new types is an everyday experience not only for children, but for adults as well. For example, we get to know new people all the time. With a new type of this sort we are able to apperceive a person in different ways of his sensible givenness[13]. In the constitution of a new type corresponding to something's general character there is also entailed a new ability to act: I can perceive other objects of the same similarity group as something like the one I have come to know before.

Now we have already considered that types and language's informal concepts have a lot in common, but it is also important to know where the differences lie. On the first view, types may look like empirical concepts, since they have a specific *content* related to the essential properties of the object (or the set of objects) they are types of, and they have an *extension*, i.e. a set of objects that can be constituted in perception with the help of this type. In that respect, there is some similarity to concepts. Yet there are also differences. The type is related to a relatively narrow group of objects that up to now I was able to constitute in perception with the help of precisely this type. So the relation of sense based on my experience is quite small and it is a group of similar objects, a *similarity group*. But this similarity group is bound to my own experience and it is limited. That means: We do not conceive of it as "fitting" infinitely many possible objects in the future course of experience, like we do with the sort of concept employed in ordinary language. And the extension of the type is not comparable to the extension of a concept, which is, in principal, unlimited. The type constitutes its object as a member of a finite group of similar objects. Nevertheless there is a path stemming from the type to the full-blown empirical concept, though it demands an overcoming of the type's limitation due to the limited experience of its possessor. In short, it requires an act of idealization.

10 Cf. Husserl (1971), 33 and 141.

11 Cf. Husserl (1971), 141.

12 Husserl writes: „Mit jedem neuartigen, (genetisch gesprochen) erstmalig konstituierten Gegenstand ist ein neuer Gegenstandstypus bleibend vorgezeichnet, nach dem von vornherein andere ihm ähnliche Gegenstände aufgefasst werden" (Husserl (1971), 35)

13 Cf. Husserl (1971), 35, 140.

In types we may already find a kind of predelineation of further, yet unknown objects that might turn out to be similar. Thus we may be able to use a type as the experiential basis for building a truly general concept out of it. But to take this step we have to change our attitude toward the object completely, i.e. we have to generalize all partial intentions bearing on the perceived object; now they are thought of as being all general concepts. The transition from a type to a concept is not trivial, because the concept is an idea of something common to infinite many objects[14].

2. The Function of Types in Perception

Now let's consider the function of types in everyday perception. A general type contains or has sedimented in it (as Husserl would prefer) what we know about this kind of object, e.g., about the way an object of a peculiar type will typically present itself in sensory experience. This is how the type "car" helps us in perception, for instance, when we see a car to our left speeding up, but we see it through a closed window, while at the same time we hear the noise of the motor from an open window to our right. Even if we hear the noise coming from a different direction we know that it must belong to the object we see speeding up in front of us.

We already know that the most important performance of a type is to guide and enable perception. The type provides the answer to one of the most central questions that arises in the entire process of perception: Which sensory elements can fulfil our intention, which sensory element can represent successfully the object I expect to perceive? The type therefore guides the activity of *collecting* the elements of given sensibility useful for representing the object. But, moreover, it also helps to decide the sense in which these intuitive elements of sensation are to be *interpreted*. We have realized this function already in the case of the noise from the window at our right, where we interpret it not as something that is located at the right but as the noise from the car in front of us. This interpretation changes the "sensory sense" (or sensory meaning) of this sound. We will have to return below to the matter of the full range of a type's possible functions in perception. In the discussion of the functions of types, I will not be able to treat the questions of the origin of types and the nature of their possible modifications in subsequent experience[15]. I take for granted here that we already have a type, e.g., corresponding to Peter (a singular person) and another corresponding to a banana, and we are able to use such types in perception. Types contain in sedimented form the experience of several perceptions of Peter and of different bananas. This "knowledge" in the form

14 Cf. Husserl (1971), 401.
15 I have treated this in another place, cf. Lohmar (2008), Chap. 7-8.

of a type is readily activated and I can make use of it in a variety of situations. For example, I am able to perceive different bananas, and with the help of the type for Peter, I am able to perceive Peter in many poses, postures, etc.
The very first stage of the process of perception starts with stimulus given in sensation that may only be, e.g., a colour, a smell, a strong contrast in the different sensory fields, or perhaps already a small fraction of some perceptual *Gestalt*. On this basis, the intuitive sensory givens provokes the arousal (*Weckung*) of a type corresponding to an object of a certain kind, so that this type will be put to work, i.e., guiding the collection of elements useful for a representation of such an object.
The arousal of a particular type is motivated by sensibility, though there are usually - due to the very multitude of motivating factors of arousal - different types aroused at the same time that step into a kind of competition to become fulfilled in the further course of perception. The process of perception is in this manner constantly accompanied by the arousal of alternative types. Some of them are very nearby the type that is now guiding the perception, i.e. they are only slight variants of some broader, overarching successfully guiding type, whereas some are directed to quite different things[16]. The success of a type in competition with others depends on its greater usefulness in making the present elements of sensibility into a representation of what the type intends. In the functioning (respectively working) of the successful leading or "dominant" type we find different activities, for example collection, combination, and interpretation of sensible elements. The type functions in the latter activities insofar as they are all guided by the contents of the type.
The dominant type guides all parts of the complex process of apperception. Let's begin considering the different functions of a type with the *selection* of elements out of sensory givens. The type "lemon" entails a fruity smell, which becomes manifest when we are nearby the object and which - if it is present - is useful for the full intuitive representation of this lemon there. A faint smell of gasoline or coffee, our slight toothaches, a gently played melody in the background - all of this is also intuitively given in sensibility, but because of our knowledge about how a lemon might present itself to us we *do not integrate these elements in the function of representation of the object*. The type "car" entails in certain circumstances the idea of the engine's sound, and so sounds like this can be interpreted as part of this object's presentation in sensibility. The pre-knowledge contained in types concerning the way objects of this kind will show

16 There are different forms of motivation that lead to the arousal of a special type. What matters in this regard is not only the relevance of the object to be perceived but also a kind of topology of objects that are most probably in this part of my every-day world. Beside this, there are different forms of association and also factors more related to an individual person's history. Cf. on this topic Lohmar (2008), Chap. 8.

up guides the *choice* and *collection* of representing sensory elements, and might also motivate a search for particular sensible elements not yet present, such as a certain sound, smell or shape.
Additionally, the *interpretation* of sensory elements is influenced and motivated by types. When hearing the sound of a car speeding up coming from my right through an open window, I interpret it as the sound of the car I see in front of me slowly speeding up. Even if the acoustic sound has another sense of direction it is reframed with a new sense of direction so that it fits what I can see. – Although this interpretation may turn out to be mistaken, it is nevertheless a way of enriching the representation of the car beyond simply relying on our visual sense. What also becomes apparent here is that the interpretation of what we really have in sensory experience is a very strong tool for our world-constitution, and it may therefore also be misleading is some cases.
The fulfilment of a perceptual intention is based on the fulfilment of all or at least the most central partial intentions that are aroused by the type. Accordingly, in a successful act of perception there is a coincidence of the (at first emptily) expected intentions with corresponding parts and properties of the object that are covered or fulfilled by intuitive intentions in sensation. For example, I may expect the lemon's fruity smell while in fact only viewing it from a distance, and then, upon approaching it, this partial intention may be fulfilled and coincide with my prior expectation.
Types are very powerful and effective tools of our pre-knowledge, as can be seen by reflecting on the different phases of the process of apperception. Beside the guiding operation of perception, there is another striking form in which the contents of types appear. Sometimes we experience the contents of our expectations in vivid "phantasmata" - and this is even possible before we are able to have those contents fulfilled by intuitive sensory givens. Consider again the case of the lemon seen at just enough of a distance to elude our sense of smell. Sometimes the fruity smell appears to my conscious awareness as a briefly occurring phantasma, a phantasma that is nearly as vivid as the sensory intuition. In this peculiar way, our pre-knowledge about the object is manifested to me "as though it was already sensibly given". And these properties that we expect of the object appear in situations where the object is lacking this property in fact, e.g., because it is a plastic lemon or because the object is still too far away to really smell it[17].

17 Such effects of the empty intentions in the form of vivid phantasmata of experienced sensory data have already been studied in empirical psychology. If you show an animated film of a bouncing steel spring and ask the experimental subjects afterwards whether they heard the characteristic "boing boing" sound of the bouncing spring, around 30% of all subjects will answer in the affirmative (which in fact was not there). Empty intentions present themselves in our sensory fields in the form of phantasmata. Cf. Biocca, Frank / Kim, Jin / Choi, Yung (2001), 247-265 and Lohmar (2008), Chap. 3.

These are clues pointing in another important direction, namely, to the fact that having a vivid intention about a particular property of an object does not require the use of concepts. Empty intentions can be realized instead by means of a phantasma directed to the pertinent intuitive sensory givens we expect on the basis of the operative type. Therefore we are allowed to suppose that many animals can make use of types in the same way as we do and that they can emptily intend the properties of the object of perception with the help of such anticipative phantasmata, which *are*, as it were, the empty intentions. If it happens that sensory givens can fulfil the empty intentions, then the vivid sensory givenness overwrites and pushes out the empty intentions presented by phantasmata. Phantasmata seem to be useful provided there is no sensory co-occurrence; but if there is sensory co-occurrence, the phantasmata show themselves to be weak by comparison.
Of course, there is also a deliberate use of fantasy, and this fantasy goes beyond the weak phantasmata that arise in the framework of a typifying perception.
If I imagine my friend Peter, then I experience a kind of pictorial memory presenting his face, his characteristic body posture, his size, perhaps also acoustic phantasmata of his voice, etc. This ability is also based on our type for Peter, because the type is an instrument that enables us to imagine and to perceive all possible postures and different ways of appearance of an object. We need this ability of imaginative free variation of the way a particular object may be appear in order to be able to perceive it. I must be able to "redraw" in imagination the familiar postures and appearances of the object (as I have come to know it up to now), even into the unknown ways in which it may possibly appear. This does not imply that I really have to be able to redraw the object like an artist with the use of pencil and paper. What I am speaking of is more basic. It is my expectations that have to be modified, thereby adjusting themselves to the particular situation in which the object appears.
But even this performance is not yet the complete realm of possibilities we can realize with the help of types. They enable us also to imagine in our fantasy lively scenes of Peter and other persons, even if we have in fact never seen these imaginary scenes. We can imagine them in a natural speed, with all the details, with the appropriate mimics and the usual rhythm of his movements as we know from other situations[18].
Up to now our examples are limited to what we are able to do with *types of singular things* in perception and imagination. Now it will turn out that we can do much of this holds also for more general types. But first let's consider some details of the use of a very peculiar type, one based only on the

18 We might ask why we are able to act like this and what good sense there is in this ability. The ease in performance of such a complex activity hints to the fact that we need these imaginative scenes sometimes. This might be related to a prominent non-linguistic system of thinking in our consciousness, cf. Lohmar (2012), 377-398.

experiences of a singular thing, e.g., a certain tree in the woods that serves as a landmark for our orientation[19]. Going through the woods we might believe that we have found this characteristic tree or site, yet with some central property or part fails to appear in perception. That is, the landmark tree is nearly as we had it in mind, but there is missing something. In situations like this our belief weakens, we become *uncertain* because the up-to-now reliable interplay of concrete expectations and following fulfilments in the constitution of objects based on sensibility is disturbed. Our usual practice is disrupted, we stop and try to orient ourselves again, taking a more precise look at the tree in question with a newly aroused interest: We want to discern whether it is really the that singular tree that we know will guide our way.

It appears that we have just passed a threshold. The concerns just raised occur already within the framework of *cognition*. The newly raised interest calls for a new form of synthesis and a new active, conscious performance. The previously undisturbed practice itself becomes a theme and a problem. Up to now there was fairly narrowly bounded change within a certain range in degrees of certainty. Anything in that range would be sufficient to allow us to carry on as usual, but now we have to *make sure* that what we are perceiving is really the landmark we sought. To reinforce our certainty we have to go back to the same place and actively restage the perception of the object, but with the novel emergence of an interest to "make sure". It is obvious that this newly initiated perception is no longer a simple perception, but rather a *cognitive process of gaining knowledge* of whether this object is really the sought-after landmark. Now the partial intentions concerning the object as expected are performed with a higher degree of attention, and the activity of checking whether or not these intentions can be fulfilled is much more critical than in the usual circumstances of perception.

I do not arbitrarily choose the example of a landmark in the form of a particular tree. We know from empirical studies in comparative cognitive psychology that there are many animals that orient themselves with very simple methods, such as those used in seal colonies that make use of seal pups' scent or cry to locate them. Even seemingly much more complex performances of orientation, like those carried out by migratory species of birds, are sometimes based on sensory feelings, e.g., a sense for the magnetic field of the earth. But there are also many animals that use visually discernible markers in difficult and complex sites. These "markers" include not only things like colour and shape, but include as well fully individualized objects like a particular tree. Most mammals and many

19 As in most other situations of perception and cognition, there is no absolute certainty.

birds with (relatively) highly complex brains use the second method just mentioned. They are able to recognize individual objects and use them as landmarks.
We know from our own experience what happens when we become certain about the landmark. It is not merely an individual object surrounded by other individuals, but is also a guide for our further practice. When all is well, we know how we have to proceed. But if perception is uncertain, then we have only one strategy to overcome the difficulty. We have to deliberately engage in an explicit re-enactment of the perception by performing each step in a conscious exercise of will. We try to answer the question, "Can I find here exactly what I was waiting for, is it precisely the constellation that I bore in mind, is it exactly the same as what I expected?

3. From Perception to Cognition

Usually perceptual type is amenable to certain possible differences in the way an object can appears to us. As long as I am able to interpret a particular object as the same object, that singular thing's type is successfully deployed in relation to its object. If the type in question is one for a general class of objects, any variation within that type that may emerge serves to individualize particular objects, and I can nevertheless see the latter as objects of the same kind. Not all trees look alike, of course. Yet they are alike at least in being trees, members of a class that admits degrees of similarity among its members. But there is a great difference between precisely this case and that of the type for a particular object. What can we do if there is persistent divergence of experience from our expectations?
Will we perhaps have to go a further step and look for some accidental or causal influence that can make the discrepancies comprehensible? Could it be that a characteristic branch of the tree has broken off due to wind? But then it would be laying here on the ground. Could it be that the leaves have all fallen from it because it is fall or winter? These sorts of questions framed in terms of causal influences often relieve us from our uncertainty. Nevertheless, we should be more patient. If we skip to the level of causality we are treating problems of perception on the level of cognition, and this level is considerably higher than that of perception. It is nevertheless true that in everyday affairs we sometimes solve such problems of identification on the higher level of cognition. But before we begin to treat problems of perceptions with the means of cognition, there is a vivid process within the level of perception that is best described as a kind of struggle and competition on the level of typifying perception. A tree in autumn surrounded by fallen leaves is a quite typical situation for deciduous trees as well as the thick leaves in summer. Thus, to solve the difficulty of uncertain

perception we might also use a tool that is on the level of perception. In short, we can switch between a given type's alternative variants. All types have such variants due to circumstances. This has nothing to do with causality. It is rather our knowledge about the usual appearance of objects as it is incorporated into our types. And this is true not only for types for singular objects, but it is also true of more general types of objects, i.e., for groups of similar objects well known to us. There are "laws" for the familiar ways in which appearances change that hold for both kinds of types. Now we see how to solve the difficulties concerning appearances that deviate from expectation by the using the technique of switching out competing variants of a given type, e.g., the type for a tree in summer or a tree in winter.
Importantly, this change of type in perception does not yet call for a deliberate striving for knowledge or an overcoming of uncertainties by the use of the idea of causality. Even if we ordinarily solve such uncertainties by shifting to cognition, the change of types is a more basic strategy that remains within the realm of perception. We have already learned that on the level of perception with the help of types there is a vivid competition between types that are aroused in the usual course of ordinary perception, and each of them strives for fulfillment- all the time. The quick change between variants of the same type is therefore by no means an exceptional case.
Nevertheless there are some disappointments in perception that are not to be resolved with such a change in type. What shall we do if a characteristic trait of a particular object is missing, e.g., the branch of a tree is broken and has vanished? In cases like this, we realize that the task at hand exceeds the play of variants in the realm of typifying perception and instead ask for a causal explanation that exceeds perception and ventures into the realm of cognition. At this point we take a first step up to the level of cognition, which is closely related and motivated by problems of perception[20]. Even the deliberate reenacting of the partial acts of perception, which are taken up into the process of cognition, are guided by the singular object's type, i.e. of all details we "know" about this special thing in advance. With the type "*causal change*" bearing on certain things, we know about the more or less probable changes this object may undergo. And if we are able to recognize this particular object with the help of causal change we perform a cognition that will henceforth guide our practice, we now know how to carry on.
It is a wide-spread opinion that cognition can be identified with propositions, with judgments that can be true or false. This claim must be weakened if we take into consideration the result of the preceding analysis about the role of types in the process of overcoming uncertainties

20 Cf. the further discussion in Lohmar (2013), 147-167.

in perception. It has to be realized that cognition is already underway when we - in a moment of uncertainty and doubt - overcome this uncertainty by using a singular thing's type in a deliberate reenactment of this perception with a new *cognitive* interest. In this context, cognition is characterized by the mode of activity and interest in the performance of a complex reenactment guided by our pre-knowledge. Such cognition is further characterized emotionally and pragmatically by the release of our uncertainties and by the enabling of further practice, respectively. In relation to this, the form of a judgment is a subsequent development.
We began our investigation with everyday varieties of habit and became attentive to the sort of habits that incorporate certain pre-forms of cognition, i.e., pre-knowledge by means of types. Types entail "knowledge" about objects, like trees, that takes shape in expectations about the concrete ways in which an object of that type can be given to us. With the help of this pre-knowledge, the type guides the constitution of objects in perception and - as we learned - also in recognizing these objects at the level of cognition. Thus, types turn out to be basic for our practical relation to the world, and they also enable us to grasp and manage the many changing properties of everyday things without using higher-level cognitive performances. We might therefore say about types what Hume once mentioned about associations: They are to us the "cement of the universe".

4. Habit and Pre-forms of Knowledge in Hume

This last point sets us up for a first look at a possible connection with the philosophy of David Hume. Hume is not only well known as a skeptic, but also as an empiricist who offers brilliant analyses of the process of cognition. And in their systematic concern, his analyses are very near to Husserl's genetic-phenomenological concept of cognition. Hume highly esteems habit and contributes in particular the idea of there being different forms of habit in cognition.
He calls habit the great guide of life, a claim that is related to the idea of our belief in the uniformity and constancy of the course of causal events in nature. This uniformity in the course of nature is one key presupposition for all of our judgments resting on experience: Similar causes will always have similar effects. The problem with this central conviction is that we cannot prove its truth. It is obviously not what Hume calls a *relation of ideas*, such that we would run into a contradiction if we were to deny it. We can think without contradiction, e.g., that the sun will not rise tomorrow. On the other hand, we cannot prove the truth of the uniformity thesis with the help of experience either, because in every judgment of experience we must already make use of this presupposition. So an attempt to prove uniformity

on experiential grounds would be circular. Nevertheless Hume was realistic enough to concede that, although it is not demonstrable, we are compelled to accept this presupposition if we want to survive at all. As Hume is unwilling to declare it to be a part of our *ratio* - like the rationalist of his time - he interprets it as a kind of *instinct*, an immutable habit or custom, and a *natural operation of the mind*.

The concept of habit he uses in this characterization is obviously not the everyday concept, because these everyday habits (of action, of expectation, of evaluation, etc.) are alterable in further experience. In view of the very foundational function of the idea of a uniform causality for the constitution of reality, and in the light of Hume's interpretation of this presupposition as a *natural operation of the mind*, we might better speak of this presupposition as a "grand-scale" habit.

But Hume also recognizes "small-scale" habits, namely the sort of habits that arise and are modified in a single person's experience, i.e., what he calls the "associations of ideas". Associations, too, have an exceptionally important function in obtaining cognitive acquisitions. It is by means of the association of ideas that our experiences with certain objects and events is retained (sedimented). This is a first apparent parallel of Hume's associations to Husserl's types. Concerning their relation to experience, two forms of association become more prominent: Associations of contiguity and causality. With a view to the problem of how to go from a stream of atomized impressions to the experience of unified things and connected events in our everyday world, associations are an empiricist's critical resource for gaining access to the nature of cognition. Associations are a means of recovering the missing connections among sensory givens. Therefore, associations can be regarded for us, in agreement with Hume, as *the cement of the universe*. They make possible the accretion of unordered and unconnected impressions, presenting unified objects and reliable connections of events that make sense for us. As the Latin verb for "growing together" (*concrescere*) indicates, and as we can also see in the relation of our own words "*cement*" and "*concrete*" associations serve as that which enables the elements of our universe of sensibility, perception and knowledge grow together.

Hume's analysis of cognition draws out attention to four elements or phases in the process of cognition. We begin with an intuitively given object like smoke. Then we realize that we have a habit of connecting this idea with another idea, say fire. Using the *natural operation of the mind* incorporated in the presupposition of a uniformity of nature, we then arrive at a belief in the existence of fire at this place. What we realize in the overview of the process is that such mutable associations of ideas are already a preform of cognition. This is yet another point of contact with Husserl's types.

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