# A Neo-Kantian Account of Perception

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**Abstract**
I suggest a reconstruction of Kant's theory of perception – in particular his notions of intuition, concept, sensible impression, sensation, synthesis and combination – informed by the progress of philosophy and human and animal psychology since his time. I take from Burge the distinction between unconceptualized perception of objects (found in animals, infants, and to some extent in adult humans) and our conceptualized, judgmental perceptual experience. Kant concentrated on the latter, but he can be seen to leave room for the former, especially if we make clearer distinctions than he did between sensible impression and sensation, and between synthesis and combination.

## Introduction

Kant took account of the scientific thought of his day including Newtonian physics and the revolution in chemistry,[1] also the proto-psychology of Tetens,[2] and in his popular lectures on anthropology he dealt with empirical facts about human nature.[3] I propose to follow his interdisciplinary example in my own modest way, putting one foot on the shoulder of a giant, and another on that modern giant Tyler Burge in his magisterial survey of the psychology and philosophy of perception in animals and humans.[4] I thus risk falling between two enormous stools, but I hope to offer a clarified Kantian understanding of perception in various creatures including ourselves.

## 1. Three kinds of blind intuition

It has been much debated recently whether there can be non-conceptual content in Kant's scheme of things. One of his most-quoted lines

[1] In some of his earliest work Kant contributed to astronomy and meteorology himself.

[2] See H.E. Allison, *Kant's Transcendental Deduction: An Analytical-Historical Commentary* (Oxford: Oxford University Press, 2015), appendix to Chapter 3.

[3] And some alleged 'facts' involving racial and gender stereotypes.

[4] T. Burge, *Origins of Objectivity* (Oxford: Oxford University Press, 2010).

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is 'intuitions without concepts are blind', which may seem to rule out unconceptualized perceptions straight away. But that is only a slogan, we need to study its context:

> Our cognition arises from two fundamental sources in the mind, the first of which is the reception of representations (the receptivity of impressions), the second the faculty for cognizing an object by means of these representations (spontaneity of concepts); through the first an object is *given* to us; through the latter it is *thought* in relation to that representation … Without sensibility no object would be given to us, and without understanding none would be thought. Thoughts without content are empty, intuitions without concepts are blind. (A50-1/B74-5)[5]

This does not say that intuitions cannot exist without concepts, only that they would be 'blind', nor that thoughts cannot lack 'content', only that they would be 'empty'. A thought in Kant's sense (and Frege's) is a proposition, something true or false, a judgable, believable, assertable content, so a thought without *propositional* content would be a contradiction in terms. But the point about cooperation between sensibility and understanding suggests that Kant was thinking of *perceptual* content here. We have plenty of thoughts without *present* perceptual content, e.g. 'I met Maria yesterday', 'I'll see her again tomorrow', 'Caesar crossed the Rubicon', 'The earth revolves around the sun'. But we could not formulate such thoughts unless we were embodied creatures who can make present-tense perceptual judgments, and that implies an *indirect* dependence of all our thought on sensibility.

I am more concerned here with the second claim, that intuitions without concepts are blind. Later on, at A90/B122 Kant declared that 'appearances can certainly be given in intuition without functions of the understanding', which suggests that there is room for blind intuitions in his philosophy (see also A111, A124, B132). But let us first clarify his notion of intuition (*Anschauung*):

> In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them, and at which all thought as a means is directed as an end, is intuition. This, however, takes place only insofar as the object is given to us; but this in turn, is possible only it affects the mind in a certain way. (A19/B33)

[5] A and B page numbers refer to the first and second editions of the *Critique of Pure Reason*, and quotations are from the translation by Paul Guyer and Allen Wood (Cambridge: Cambridge University Press, 1996).

So Kantian intuitions are mental states that relate immediately, by way of singular reference, to mind-independent objects and states of affairs when presented by causally impinging on our sense-organs.[6]

So what can count as *blind* intuition? If Kant meant *unconceptualized*, it would be trivially analytic that intuitions without concepts are blind. A more plausible interpretation is that 'blind' means *unconscious,* and therefore not available for judgment or inference. Some will say that perception in animals is unconscious, but that depends on how we interpret the notion of consciousness. Some may say we can never know about an animal's state of mind, though we tend to be more generous to our babies. Others may reply that though animals manifestly perceive objects, they don't perceive *facts*, they can't see *that* anything is the case. But common usage and ethology agree in saying that many animals can see *that* a predator is approaching or a prey is escaping in a certain direction. Some philosophers and psychologists say that animals and infants apply concepts of a primitive sort,[7] but Kant (and Frege) had a stronger sense of *Begriff* according to which concepts are 'predicates of a possible judgment' (A69/B94), and judgments are expressible in sentences.

Are there unconceptualized perceptions in adult humans? In the *Jäsche Logic* Kant offered a disputable (and politically incorrect) example:

> If a savage sees a house from a distance, for example, with whose use he is unacquainted, he admittedly has before him in his representation the very same object as someone else who is acquainted with it determinately as a dwelling established for men. But as to form, this cognition of one and the same object is different in the two. With the one it is *mere intuition*; with the other it is *intuition* and *concept* at the same time.[8]

[6] Kant had deep and difficult things to say about *pure* or a priori intuition of space and time, but in this paper I am dealing only with *empirical* intuition, i.e. perception in the modern sense.

[7] R.G. Millikan, 'A Common Structure for Concepts of Individuals, Stuffs, and Real Kinds', *Behavioral and Brain Sciences* **21** (1998); R. Hanna, 'Kantian Non-Conceptualism', *Philosophical Studies* **137** (2008), 41–64; S. Carey, *The Origin of Concepts* (Oxford: Oxford University Press, 2009); E. Mandelbaum, 'Seeing and Conceptualizing', *Philosophy and Phenomenological Research* (2017), 1–17.

[8] Kant, *Lectures on Logic*, translated and edited by J.M. Young (Cambridge: Cambridge University Press, 1992), 9:33.

In a culturally converse situation, an archaeologist might dig up a mysterious artefact for which she cannot think of an intended use. But these are not completely blind intuitions, for both 'savage' and archaeologist can surely describe what they see as a material object of a certain size and shape. There is a more complete lack of conceptualization when we react behaviourally to a noxious smell or a sudden noise, or cringe on seeing something flying towards us. Unconceptualized perceptions can exist alongside or underneath our most conceptualized experience.

What about consciousness? This is of course a very hot potato in philosophy and psychology, and I can only handle it momentarily here. Can some animal perception be *conscious*? I submit that our untheoretical talk of consciousness does not settle the question: it is not as if there is some fact of the matter that is forever beyond our ken, but that we are somewhat unclear about what the question *means*. A stag hears the bellow of a rival and sees his threatening posture, and he is surely *aware* of it, for he gets ready to do battle himself – so why not say he is *conscious* of his rival? But there is no reason to say he is *self*-conscious, he certainly does not use a first-person pronoun.[9] Kant said that before using the word 'I' the child 'merely felt himself; now he thinks himself',[10] but about adult humans he declared:

> All intuitions are nothing for us and do not in the least concern us if they cannot be taken up into consciousness, whether they influence it directly or indirectly, and through this alone is cognition possible. (A116, see also B131-2)

But given the existence of some unconceptualized perceptions in even the most intellectual of us, we can hardly agree that they 'are nothing for us and do not in the least concern us', for they can affect our behaviour, if not our consciousness. Kant's main concern in the first *Critique* was with the necessary conditions of our *self*-conscious and conceptualized knowledge that he calls cognition, but he acknowledged that we have many mental states of which we are not conscious:

> A contradiction appears to lie in the claim that to have representations and still not be conscious of them; for how could we know that we have them if we are not conscious of them. … However, we can still be *indirectly* conscious of having a representation,

[9] S. Naragon, 'Kant on Descartes and the Brutes', *Kant-Studien* **81** (1990), 1–23; Hanna, op. cit. note 7; Burge, op. cit. note 4, 155.

[10] Kant, *Anthropology from a Pragmatic Point of View*, trans. R.B. Louden (Cambridge: Cambridge University Press 2006), 7:127.

> even if we are not directly conscious of it. Such representations are then called *obscure* …
>
> The field of sensuous intuitions and sensations of which we are not conscious, even though we can undoubtedly conclude that we have them, that is, *obscure* representations in the human being (and thus also in animals) is immense … only a few places on the vast *map* of our mind are *illuminated*. This can inspire us with wonder over our own being…[11]

However conceptualization and availability to consciousness do not always coincide. We retain many memories and beliefs through the periods when we are not consciously thinking of them (Freud called them '*pre*conscious'), but if there is any truth in Freudian theory of the *un*conscious or Sartre's conception of bad faith, people can have perceptions of the emotive or erotic meaning of someone's behaviour and speech that may resist being brought to consciousness, even if that meaning *could* be expressed in terms of the subject's concepts. In the *Anthropology* Kant alluded to repressed ideas, anticipating Freud's interpretations of the sexual meaning of many jokes, figures of speech and gestures:

> We often play with obscure representations, and have an interest in throwing them in the shade before the power of imagination, when they are liked or disliked. However, more often we ourselves are a play of obscure representations, and our understanding is unable to save itself from the absurdities into which they have place it, even though it recognizes them as illusions.
>
> Such is the case with sexual love … How much wit has been wasted in throwing a delicate veil over that which, while indeed liked, nevertheless still shows such a close relationship with the common species of animals that it calls for modesty? And in polite society the expressions are not blunt, even though they are transparent enough to bring out a smile. Here the power of imagination enjoys walking in the dark…[12]

*Subliminal* perception also involves conceptualization without consciousness, and it has been experimentally demonstrated that people's behaviour can be affected by very brief displays (not consciously noticed or verbally reportable) of an advertisement or an

[11] Op.cit. note 10, 7:135.
[12] Op.cit. note 10, 7:136.



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emotive word, where the *meaning* of the display must be understood at some level for the subliminal perception of it to have its distinctive effect.[13]

I have already alluded to the converse phenomenon of human consciousness without conceptualization. One can see something indistinctly in fog, on the horizon, or in one's peripheral vision, without being able to apply any concept to it – maybe not even *material object* for it might be only a shadow, a reflection, or a gap between objects. When playing tennis we hit back oncoming balls without applying concepts of their speed, direction or spin. Many of us can recognize a tune or sing a passable rendition of it without resort to musical notation. We recognize people by their faces without being able to describe their identifying features in words, and we are hypersensitive to their facial expressions, gestures, and tones of voice: our evolution as a highly social species has equipped us with face-recognition modules and emotion-discerning capacities which operate before any conceptualization kicks in. I therefore propose that we can distinguish the following four levels of mentality, including three species of blind intuition:

a. *Conceptualized and conscious*. Much human perception falls under this heading, whenever we make perceptual judgments that are expressed or expressible in language. This level of mentality, which Kant calls 'cognition' (*erkenntis*) or *experience* (*Erfahrung*), is at the centre of his attention.
b. *Conceptualized, but not available to consciousness*. Subliminal perceptions, and perceptions whose content is repressed, belong here. These form one kind of blind intuition, which Kant calls 'obscure' (*dunkel*).[14]
c. *Unconceptualized, but conscious*. For example, unidentified tastes, smells, noises, flashes, pressures and tickles: these are a second species of blind intuition in which we are aware of our own 'sensations' (*Empfindung*). There are also perceived but unconceptualized features of the external world in music, art, facial expressions, or tennis.
d. *Unconceptualized, and not available to consciousness*. The first effects of the environment on our sense-organs are the third and lowest level of blind intuition, which Kant calls 'sensible impressions' (*sinnliche Eindrück*e).

[13] H.R. Schiffman, *Sensation and Perception: An Integrated Approach* (New York: Wiley, 2001), 35–6.

[14] Kant, *Theoretical Philosophy 1755–1770* (trans. / ed.) D. Walford and R. Meerbote (Cambridge: Cambridge University Press, 1992), 2:290.

## 2. Sensible impressions or sensations?

On the first page of B, Kant used the term 'sensible impressions' for the raw sensory impacts that form the input to the processes involved in perception:[15]

> There is no doubt that all our cognition begins with experience; for how else should the cognitive faculty be awakened into exercise if not through objects that stimulate the senses and in part themselves produce representations, in part bring the activity of our understanding into motion to compare these, to connect or separate them, and thus to work up the raw material of sensible impressions into a cognition of objects that is called experience. (B1, see also A86/B118)

But his language in this area roams around a bewildering (baroque?) panoply of terminology, including: 'a manifold in intuition' (A97, 99), 'representations, as modifications of the mind in intuition' (A97), 'the succession of impressions on one another' (A99), 'sense represents the appearances empirically in perception' (A115), 'the manifold of sensible representation (intuition)' (A129, B129), 'representations given in intuition' (B133–4), 'the manifold of a given intuition' (B137), and 'sensations'. Kant described the initial sensory stimulations as one kind of representation. which may suggest that they are available to consciousness – but his very capacious use of 'representation' (detailed at A320/B376) does not have that implication. Philosophers in the empiricist and sense-data tradition have assumed that perception is based inferentially on a foundational layer of introspectable mental items that have variously been called 'ideas', 'impressions', 'percepts', 'sense-data', 'sensations', 'qualia' or 'phenomenal qualities'. (I am suggesting that Kant pointed the way towards a different view, though somewhat unsteadily)

Tyler Burge compliments Kant for improving on preceding philosophy by distinguishing between sensation, intuition and concept, which Burge lines up with his own distinctions between sensory registration, perception, and propositional thought.[16] His survey of perceptual psychology firmly distinguishes perceptual representation

[15] In the corresponding first edition passage at A1 Kant wrote of 'sensible sensations'. I suggest that the difference is more important than perhaps he realized. Rolf George, in 'Kant's Sensationism', *Synthese* **47** (1982), 229–55, interpreted Kant as a 'sensationist' but did not clearly distinguish sensations from sensible impressions.

[16] Op.cit. note 4 (9, 11, 104, 155).

of physical objects and states of affairs from mere sensory registration and reaction. The latter is exemplified in molluscs closing up whenever a shadow passes over them: this is a defensive adaptation that reduces their chances of being eaten, but they do not form any perceptual representation of the cause of the shadow. A more subtle case of sensory registration is found in salmon who navigate from the far reaches of the ocean back to the stream in which they were born, guided only by extremely dilute traces in the seawater. Impressive as this is,[17] there is no reason to judge that salmon have any perceptual representation of the chemistry of the ocean, or of the location of their birthplace. There *may* even be some mere sensory registration in humans: many animals and insects emit chemicals known as pheromones which affect the behaviour of conspecifics, often to communicate availability for mating, and it is apparently an open question whether humans respond to pheromones, erotic or otherwise.[18]

Perception *proper*, involving the formation of representations that distinguish and track material objects and states of affairs, takes place in a wide variety of animals. Archer fish aim a gobbet of spit at insects sitting on leaves above the water, allowing for the refraction of light through the surface and knocking the prey off its perch to be gobbled up for lunch. Jumping spiders navigate expertly in a tangle of twigs. Most mammals and birds perceive their mates, rivals, offspring, prey, or predators, tracking them through space and time through a variety of perspective, distance, lighting, and motion. Kant was in no doubt that animals perceive objects, in *some* sense.[19]

Neuroscience investigates the mechanisms that make perceptual representation possible. In the case of vision, computational processes in the brain transform the patterns of light striking the retina into representations of objects of certain sizes and shapes at various distances. This involves mathematical transformations of very subtle geometric properties of the retinal stimulation, guided by innate neurophysiological programmes.[20] We can recognize that, with

[17] It may give comfort to enthusiasts for homeopathy.

[18] See T.D. Wyatt, *Pheromones and Animal Behaviour: Communication by Smell and Taste* (Cambridge: Cambridge University Press, 2003), Ch.13. If any such effect can be experimentally demonstrated, that would be *subliminal* perception rather than the perfumes some of us pay good money for, and can sniff.

[19] As he made clear in pre-critical writing, see op.cit. note 14, 2:59–60 and 2:285.

[20] As explored in the pioneering work of David Marr, *Vision* (San Francisco: W.H. Freeman, 1982); see Burge, op.cit. note 4, Ch. 8 & 9.

hindsight, as part of the 'working up' of the raw sensible impressions that Kant talked of. But even in the most knowledgeable of humans such processes are not usually available to consciousness, and they are not propositional inferences. They are not normally affected by the will, and their functioning is demonstrated by the persistence of visual illusions such as the Müller-Lyer and Escher's drawings even when one knows they are illusions.

Much philosophical talk of sensations has been ambiguous and controversial. But Kant made available (though not as up-front as we might like) a distinction between *sensations* as conscious mental states, and *sense-impressions* which seldom or never reach consciousness. Admittedly his first mention of sensation as 'the effect of an object on the capacity for representation, insofar as we are affected by it' (A19-20/B33-4) seems to leave it open to understand the relevant effects as unconscious and physiological. However in his rather belated systematic classification of his mental vocabulary at A320/B376-7 he defined sensations as those *conscious* representations ('perceptions') that involve only a state of the subject, as opposed to 'objective perceptions' or cognition (see also his treatment of sensation at B207-8). So in Kant-speak, sensations are conscious representations that don't actually represent anything distinct from the subject.[21] He was prepared to count anything that *contributes* to cognition as a representation, a mental state in the widest possible sense.

In contemporary usage the word 'sensation' is most at home in talk of *bodily* sensations such as pains and itches, and the activities and pleasures involved in swimming, tennis, sex or the consumption of chocolate liqueurs. It is natural to say that our senses of touch, smell and taste involve sensations, since they involve bodily *contact* with whatever we sense, so that we can readily be aware *both* of our own sensations and of what is causing them (though often in an unconceptualized way when we cannot find words to describe a taste, a smell or a caress). Our sensations may be caused by external objects or internal bodily states, but that does not mean that they are *of* their causes in the representational sense. A pain can be

[21] Thomas Reid's understanding was similar: 'Sensation is a name given by philosophers to an act of the mind, which may be distinguished from all others by this, that it hath no object distinct from the act itself', *Essays on the Intellectual Powers of Man* (Cambridge, Mass.: MIT Press, 1969), I.i.12. He went on to argue that 'a quality perceived, and the sensation corresponding to that perception, often go under the same name' (in his example, the smell of a rose), and 'this ambiguity has very much perplexed philosophers' (II.xvi).

caused by a pin, or by acid or a tumour, but it does not *represent* any of those things: one can be vividly aware of a pain while knowing nothing of its cause. It is not quite so natural to talk of sensations in our *distance* senses of hearing and sight, but Kant offered an example:

> We have many representations that do not relate to an object, for example all inner sensations. They relate to the subject. If someone speaks to me, I have a representation that relates to the object; hence this is cognition: but if he yells at me so that my ears hurt, then it is sensation and I feel my own state. (*Politz Logic*, 24:565)[22]

Tinnitus, in which someone is bothered by illusory ringing in the ears, would be another case. For cases of visual sensation we can think of after images, of the 'rays' one 'sees' if one looks at a light-bulb and screws up one's eyes, the redness one experiences through closed eyelids in sunlight, the shimmering effect of some subtly-patterned geometric paintings, or the double image of something too close to one's eyes. In these cases one is aware of a state of one's own visual system rather than (or as well as) something distinct from oneself. But these examples are of the illusory, the abnormal, the painful, even the medical. Are there aural and visual sensations in every *normal* case of hearing and sight? In most cases we simply hear or see things without being aware of sensations in our ears or eyes – we do not 'feel our own state', as Kant put it, though we can pay introspective attention to how things seem to us. But sensible impressions, understood as the physical effects of the stimulations of our sense-organs, are involved, by definition, in all the senses all the time.

So, contrary to the tradition of Lockean ideas, Humean impressions, Russellian/Moorean sense-data or modern-day phenomenal qualia,[23] we should not expect to find a lower level of propositional judgments about the contents of our conscious sensory states to serve systematically as premises to justify our perceptual judgments about the external world.[24] There are *causal* processes in perception, which psychology has now investigated in intricate detail in many creatures, but in humans these causal intermediaries are not

[22] Imagine how Kant would have suffered in an amplified rock-concert!

[23] Revelled in unhibitedly by David Chalmers in *The Conscious Mind*. (New York: Oxford University Press, 1996).

[24] As argued by Wilfrid Sellars in his modern classic *Empiricism and the Philosophy of Mind* (Cambridge, Mass: Harvard University Press, 1997, with an introduction and study guide); first published in 1956.

*inferential* intermediaries.[25] True, the more sophisticated of us can, with some mental effort, describe how things *look* or *sound* to us from where we are at particular moments of time.[26] Such descriptions use in a qualified way some of our normal vocabulary for public objects and states of affairs. It requires special skill to draw in correct perspective, and to decide what colours grass *looks* in sunlight and shadows (and to represent that appearance in paint), though most of us can recognize that something looks spherical or heavy, or that someone looks elderly or angry. We are not restricted to the two-dimensional patches of colour beloved of the sense-data tradition, which now appears to be a mongrel offspring of two quite distinct conceptual schemes: the causal-scientific-physiological and the introspective-conscious-inferential. I propose that we accept Kant's distinction between sense-impressions, sensations, and empirical intuitions, and enforce them more consistently than he did.

## 3. Synthesis: psychology or philosophy?

Having firmly distinguished between intuitions and concepts, and less clearly between sensible impressions and sensations, Kant introduced his notion of 'synthesis':

> Transcendental logic … has a manifold of sensibility that lies before it *a priori* … the spontaneity of our thought requires that this manifold first be gone through, taken up, and combined in a certain way in order for a cognition to be made out of it. I call this action synthesis. (A76-7/B102)

> By *synthesis* in the most general sense, however, I understand the action of putting different representations together with each other and comprehending their manifoldness in one cognition. (A77/B103)

[25] One may see that something looks blue in artificial light and infer that it is really green, but that depends on prior knowledge that such lighting affects the way things look (as Sellars noted).

[26] In a lecture in 1910 G.E. Moore introduced his audience to sense-data by holding up an envelope and inviting them to consider 'what exactly happened to them when they saw it' – by which he meant: concentrate not on the object itself, but on the visual perspective it presently displays to you. See *Some Main Problems of Philosophy* (London: George Allen and Unwin, 1953), Ch.II).

And at this stage he suddenly introduced a third mental faculty, operating somewhere in between sensibility and understanding, called 'the imagination' (*Einbildungskraft*), to perform the function (or functions?) of synthesis:

> Synthesis in general is, as we shall subsequently see, the mere effect of the imagination, of a blind though indispensable function of the soul, without which we would have no cognition at all, but of which we are seldom even conscious. (A78/B103)

He thus recognized that most of the mental processing in perception proceeds below our conscious awareness. (Indeed it happens very fast, for we make many of our perceptual judgments almost instantaneously) We might expect him to hand over to empirical psychology and physiology at this point, yet he went on to theorize in some detail about synthesis, even though he of all people was vividly aware of the distinction between empirical science and *a priori* philosophy. In the closing pages of the first *Critique* he declared that 'empirical psychology must be entirely banned from metaphysics', yet he conceded 'a little place' for it as 'a long-accepted foreigner, to whom one grants refuge for a while until it can establish its own domicile in a complete anthropology' (A848-9/B876-7). No doubt that reflected the state of psychology in 1781, but it has now progressed far beyond that, and has firmly established its proper 'domicile' among the natural sciences, so I submit that our understanding of perception should take account of this. Kant offered a threefold theory of synthesis in the first edition, yet in the Preface he suggested it was not essential to his argument:

> This inquiry, which goes rather deep, has two sides. One side refers to the objects of the pure understanding, and is supposed to demonstrate and make comprehensible the objective validity of its concepts *a priori*; thus it essentially belongs to my ends. The other side deals with the pure understanding itself, concerning its possibility and the powers of cognition on which it itself rests; thus it considers itself in a subjective relation, and although this exposition is of great importance in respect of my chief end, it does not belong essentially to it; because the chief question always remains: 'What and how much can understanding and reason cognize free of all experience?' and not 'How is the *faculty of thinking* itself possible?' (Axvi–xvii)

The latter question sounds indeed like one for empirical psychology to answer, but Kant reiterated here that the main purpose of his Transcendental Deduction was to show that the categories must

apply in our experience, as an *a priori* truth. That is the *objective* side of his argument, as explained in the introductory section common to both editions:

> I therefore call the explanation of the way in which concepts can relate to objects *a priori* their *transcendental deduction*, and distinguish it from the *empirical* deduction, which shows how a concept is acquired through experience and reflection … (A85/B117, see also A86-7/B118-9, A93/B126)

However in the following passage he rather surprisingly declared:

> The categories of the understanding, on the contrary, do *not* represent to us the conditions under which objects are given in intuition at all, hence objects can indeed appear to us *without* necessarily having to be related to functions of the understanding, and therefore without the understanding containing their *a priori* conditions. (A89/B122, with my emphases; see also A111, A124, B132)

That seems to allow as a possibility precisely what the Transcendental Deduction is supposed to rule out. Some scholars used to suggest a patchwork thesis, that in the rush to publication Kant stitched together bits of draft text without sufficient care; but a more sympathetic interpretation is that it only *seems* at first glance that there is a possibility of uncategorized appearances, whereas the Deduction's task is to show that that is an illusion. I suggest a third reading, that Kant was recognizing (if only briefly) the reality of unconceptualized perception.[27] That does not count as 'experience' in his sense, which implies concept-application and judgment (A106). Unconceptualized perceptions may be 'as good as nothing for us' in the sense that we cannot use them in conscious inferences, hence not in science. But they can certainly make a difference to us, as shown in our behavioural reactions to flashes, bumps, gestures, facial expressions and tones of voice. So the aim of the Transcendental Deduction can be reformulated as to demonstrate that the categories must apply to our *conceptualized* perceptual experience. The *subjective* side of the Deduction can be construed as *a priori* reflection on what *constitutes* perception, whether conceptualized or not – which would explain Kant's claim that his question 'How is the faculty of thinking itself possible?' is not, after all, the 'seeking the cause of a given effect' (Axvii).

[27] Hanna, op.cit. note 7; Lucy Allais, *Manifest Reality: Kant's Idealism and his Realism* (Oxford: Oxford University Press, 2015), Ch.7, 169–175.



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## 4. Three levels of synthesis

Let us now examine the three syntheses in the A Deduction.[28] In the first, 'the synthesis of apprehension', his main point seemed to be that all representations including perceptions occur successively in time. He talked of 'the mind distinguishing the time in the succession of impressions on one another', and declared that 'in order for *unity* of intuition to come from this manifold (as, say, in the representation of space), it is necessary first to run through and then to take together this manifoldness (A99)'. That may make it sound like a conscious, deliberate process of mental activity, as when a biologist takes a number of photographs of whales and tries to work out how many different animals there were. But Kant has said that synthesis is seldom if ever conscious. So I suggest that his synthesis of apprehension should be understood as occurring at an *unconscious* level, in which there is a succession of sensible impressions (*not* consciously-noticed sensations) which do not immediately fade and 'leave not a rack behind', but their effects persist briefly in the sensory systems and form the inputs to perceptual processing. For example, the rapidly increasing size of a retinal image usually leads to awareness (in both animals and humans) that something is approaching, or being approached (though more rarely, the object might be expanding, like a balloon).

The *spatial* nature of much sensory stimulation and processing is implied by Kant's parenthetical remark about the unity of intuition in the representation of space at A99. This is exemplified in the two-dimensional patterning of light on the retina and in the slight difference between the two retinal images, and the subtly different air vibrations received by our two ears which enable us to locate objects and sounds in public space. There is also the location of stimulations on our three-dimensional bodily surfaces which led to our tactile feelings of tickles, pressures or heat.

Kant's treatment of the second synthesis, 'of reproduction in the imagination', at A100-2 is obscure, despite the unusual flurry of examples to illustrate his abstract theorizing. One obvious point is that the association of representations cannot work unless there are rule-governed conjunctions of the objects or events that cause the relevant perceptions.[29] Kant seems to have had something more conceptual in

[28] This trio is not reproduced in B, but it surfaces again in a sketch of 'the whole of the critical philosophy' in a late *Reflexion* of 1797 (R6385, 18:682–5), so it seems Kant never really gave it up.

[29] As Burge notes, associative-behavioural conditioning is found much lower down the evolutionary scale than Pavlov's dogs.



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mind when he talked of 'my empirical imagination getting the opportunity to think of heavy cinnabar on the occasion of the representation of the colour red' – but surely not on *any* sighting of red, e.g. in an apple or a sunset – perhaps he was thinking of the situation of digging up a distinctively red substance. His other example – of the difficulty that would be presented to empirical imagination 'if a human being were now changed into this animal shape, now into that one' – implies that our recognition of instances of kinds depends on there *being* natural kinds (such as creatures and chemicals) that exhibit stable and repeatable clusters of perceptible properties.

However, recognition of kinds can occur at an apparently *non*-conceptual level: e.g. gorillas recognize which plants are edible for them, and show them to their young, and an African bird makes different alarm calls for different predators.[30] Does the bird apply a concept of *leopard* or *eagle* or *snake* when it sees one? That depends on what we mean by 'thinking' and 'concept'. It certainly perceives them, and distinguishes between them in its behavioural reaction, but for Kant *thought* is conceptual and judgmental, and judgments are expressible in language. Primates and birds do not have anything as rich as a human language, although some of them in captivity have been taught some symbol-use, so it seems there is some empirical shading of the supposedly sharp distinction between animal and human thought and language. Without going further into this much-debated area, we can say that there is a mental level of perceptual tracking of individual objects, and recognition of kinds of object, that lies in between mere associative conditioning and linguistically-expressible perceptual judgment. This seems to fit naturally into Kant's second synthesis, since he reserves concepts for the third.

Kant's third synthesis, 'of recognition in the concept', leads him away into a discussion of objects of representation, transcendental apperception, and his notion of transcendental object (A103-110), which is beyond the scope of this essay. At the beginning it is difficult to see how the third synthesis differs from the second, for he talks again of reproduction, and of maintaining the content of thought from one moment to the next, and he appeals to the same example of counting. But he goes on to talk of *concepts* and '*consciousness* of unity of synthesis', declaring that 'it is this *one* consciousness that unifies the manifold that has been successively intuited, and then also reproduced, into one representation' (A103). This broaches

[30] R. Byrne, *The Thinking Ape: Evolutionary Origins of Intelligence* (Oxford: Oxford University Press, 1995).

themes that are more fully developed in the B Deduction, to which I will now turn.

I am suggesting that we construe Kant's 'three subjective sources of cognition: sense, imagination, and apperception' (A115) as follows:

1. The reception and brief retention of sensory impressions in the sense-organs.
2. The spatiotemporal patterns of these sensory impressions are processed to form unconceptualized perceptual representations that inform the perceiving creature of the shape and size, distance and movement of objects, and of the direction and movement of sources of sound.
3. Rational subjects like ourselves apply concepts and make judgments about what we perceive, and this involves some degree of self-consciousness.

## 6. Combination

The Transcendental Deduction in B is resolutely top-down rather than bottom-up (as was the later part in A): it starts from human self-conscious conceptualizing mentality, rather than the lower levels of which we may share with the animals. Here Kant uses the term 'combination' more than 'synthesis' and I want to ask whether there is any relevant distinction. For once in this paper I will put a more extended portion of text under the microscope, the first two sentences in the opening section in B.

> The manifold of representations can be given in an intuition that is merely sensible, i.e. nothing but receptivity, and the form of this intuition can lie *a priori* in our faculty of representation without being anything other than the way in which the subject is affected. (B129)

Our sense-organs are affected by a stream of physical stimulations in space and time. But we go beyond such mere receptivity, as Kant now explains using a new term 'combination':

> Yet the *combination* (*conjunctio*) of a manifold in general can never come to us through the senses, and therefore cannot already be contained in the pure form of sensible intuition; for it is an act of the spontaneity of the power of representation, and, since one must call the latter understanding, in distinction from



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> sensibility, all combination, whether we are conscious of it or not, whether it is a combination of the manifold of intuition or of several concepts, and in the first case either of a sensible or a non-sensible intuition, is an action of the understanding, which we would designate with the general title *synthesis* … (B129-130)

It may sound as if 'combination' and 'synthesis' are to be synonyms, but three significant points are packed into this densely-packed sentence:

(a) Combination can be conscious or unconscious. But Kant described synthesis as blind and unconscious at A78/B103, so combination must be either a broader notion that includes synthesis, or something quite distinct from synthesis.
(b) Combination can be either of 'the manifold of intuition' (synthesizing *sensible impressions* into the perception of an object), or it can be the combination of *concepts*. But the latter is significantly different, so what did Kant have in mind? It could be the combination of two concepts into a complex concept (e.g. *black cat*) or into a judgment (*This cat is black,* or *Some cats are black*), or within a non-asserted proposition (*If that cat is black, it's unlucky*, *Is it true that black cats are unlucky*?). All these involve 'acts of the spontaneity of the power of representation', i.e. of the understanding as opposed to mere receptivity or sensibility. But if 'combination' covers all these conceptual cases as well as perceptual synthesis, it is a very ambiguous term.
(c) Combination can be either of 'sensible or a non-sensible intuition'. The latter is the pure synthesis of representations of space and time, introduced in the Aesthetic at A24-5/B39 and A31-2/B4 and mentioned at A77/B103 – but that doctrine is beyond the scope of this essay.

Kant's long sentence ends as follows:

> … in order at the same time to draw attention to the fact that we can represent nothing as combined in the object without having previously combined it ourselves, and that among all representations *combination* is the only one that is not given through objects but can be executed only by the subject itself, since it is an act of its self-activity (B130).

But that doesn't sound quite right, for if combination is a mental *activity* of combining representations it does not follow that combination is *itself* a representation – the mind need not represent its own



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activity (infinite regress would surely threaten). It seems Kant should have written 'acts' or 'functions' rather than 'representations' here.

The synthesis of sensible impressions into perceptual representations of objects typically operates below the level of consciousness, but in this opening section of the B Deduction Kant's focus is on understanding, spontaneity, and judgment, and he is here emphatic that 'all combination … is an action of the understanding' (see also B134-5). When he says that 'combination is representation of the *synthetic* unity of the manifold' (B130-1), I suggest we construe this *not* as the synthesis (or syntheses) involved in unconceptualized perception, but the third kind of synthesis, now labelled combination, that is involved in making *judgments*. As Kant says, judgment is an affirmation of how things are: it is more than 'the representation of a relation between two concepts' (B140), it involves objective rather than subjective validity (B141-2). And now consciousness, or more precisely *apperception* or *self*-consciousness, comes into the story in a famous way:

> The *I think* must be *able* to accompany all my representations, for otherwise something would be represented in me that could not be thought at all, which is as much as to say that the representation would either be impossible or else at least would be nothing for me. (B131-2)

That makes it explicit that he saw human judgment as involving *self*-consciousness, at least potentially. As we have seen, he tends to dismiss unconscious states as 'nothing for us', but this does not mean that they do not exist or that they have no effects on us, only that they do not figure in our conscious cognition.[31] In talking of the *I think* accompanying our representations, Kant surely had in mind judgments rather than intuitions or concepts, for the phrase belongs in contexts of the form 'I think that p' for some *proposition* p (including the case 'I wonder whether p'). A cat can see another cat, but it cannot say 'I see a cat', or even think 'I think I see a cat'. Of course we do not explicitly attach the *I think to* every judgment that we make. The point is only that we *must be able to*: it is the necessity of a possibility. But why the necessity? I take Kant's point to be that for a judgment to 'be something for me' it must be available for me to make deductive or inductive inferences, I must hold it open to

[31] Those claims might be questioned in the light of Schopenhauer, Freud and subsequent psychology; indeed Kant admitted in a letter that unconscious perceptions can affect our feelings and desires (to Herz in 1789, in *Correspondence* 11: 52).

confirmation or disconfirmation.[32] So I must be able to hold together any of my judgments as premises for inference, e.g. if I think that p, and I think that q, I can think that p and q. Moreover I can say 'I used to think not-p, but I now think that p', and 'I think that p, but my wife thinks that not-p'. For any single mental act to count as a judgment, it must be a manifestation of that sophisticated mental faculty that Kant calls the power of judgment (*Urteilskraft*). And so he argues from his table of the logical forms of judgments (A70-80/B95-106) to the necessity for any conceptualizing mind to be able to apply the *a priori* concepts that he finds implicit in those logical forms. *Inference* can thus be reckoned (with only a slight stretch beyond the text) as another species of the genus combination, since from one or more judgments as premises, another judgment can emerge as conclusion.

When Kant states that 'this thoroughgoing identity of the apperception of a manifold given in intuition contains a synthesis of the representations, and is possible *only through the consciousness of this synthesis*' (B133, with my emphasis), we may be tempted to apply this to the first and second syntheses involved in perception. His very abstract formulas like this tend to admit of multiple applications at different levels of mentality. But if we construe 'representations' here as referring to *judgments* rather than perceptions, we can make different and relevant sense of it in this context. If the representations here were *sensible impressions*, the statement would contradict the fact that the synthesis of *them* is a process of which we are seldom if ever conscious.

This suggests an important qualification to that striking statement which many interpreters have seen as pivotal to Kant's whole argument in the Analytic:

> The same function that give unity to the different representations *in a judgment* also give unity to the mere synthesis of different representations *in an intuition*, which, expressed generally, is called the pure concept of understanding. (A79/B104-5)

I am not denying that Kant believed this. It reflects his top-down approach to cognition, enquiring into the necessary conditions of our most reflective, self-conscious, judgmental mental activity (what he called 'experience'). Thus he saw the forms of judgment as the clue to the categories, and the latter as structuring all our perceptions.[33]

[32] Patricia Kitcher, *Kant's Thinker* (Oxford: Oxford University Press, 2011), Ch.9.

[33] As Beatrice Longuenesse has argued in impressive detail in *Kant and the Capacity to Judge* (Princeton: Princeton University Press, 1998).

What I am questioning is the general *truth* of that latter claim. To be sure, a concept can function both in a conceptualized perception (e.g. the recognition of a cat as such) and in judgments involving that same concept in subject or predicate position (e.g. 'My cat is female', 'That is a cat'). But I suggest that the kind of unification or synthesis or combination involved is importantly different in the two cases, for perception involves the unconscious synthesis of sense-impressions into the representation of an object, whereas judgment involves the predication of concepts in a proposition and the belief that that represents how things are.

So I dare to suggest that we can improve on what Kant has bequeathed us by distinguishing different sorts of synthesis or combination.[34] Above the level of sensory registration (where mere associative learning applies) we should distinguish the following levels of mental processing:[35]

(a) the synthesis of a perceptual representation of an object from a spatiotemporal manifold of sensible impressions (e.g. from sounds of scratching and glimpses of fur to the perception of a creature lurking in the woodshed).

A dog can hear such sounds and have such glimpses (and he detects smells we can't), but he has no *concepts* of rat or woodshed in the Kantian sense of concept. Therefore (a) needs to be divided into:

($a_1$) syntheses of *unconceptualized* perceptions of objects from manifolds of sense-impressions (e.g. by dogs or other animals, or when we see or hear an unidentified something buzzing round our head, or turn up our noses at an unpleasant smell).

($a_2$) syntheses of *conceptualized* perceptions of objects from manifolds of sense-impressions (e.g. when we realize that there is a furry creature in the woodshed, that it is a wasp that is buzzing around, or that the drain is blocked).

(b) the combination of intuitions and concepts into a judgment about a perceived state of affairs (e.g. that this cat is

[34] Kant divided the first *Critique* into Aesthetic, Analytic, and Dialectic – supposed to deal respectively with intuitions, concepts plus judgments, and inferences.

[35] In a few places Burge mentions further distinctions of mental levels: between single- or cross-modal non-propositional representation, and between unconscious or conscious propositional attitudes (op.cit. note 4, 431, 538), suggesting that apes have the former (492, 538). But to discuss all that would be another story.

tortoiseshell in colour – which involves whatever synthesis is involved in recognizing cats as such, as in $a_2$).

(c) Propositional inferences, e.g. in which a judgment about a public objector state of affairs is arrived at from a combination of perceptual judgments, e.g.

(spatial) Here is a finger-bone sticking out of the soil, and here is a toe-bone a few feet away, so probably they belong to the same skeleton.

(cross-modal) The teacher hears a rude noise, she sees a smirk on Buggins' face, and decides he is the culprit.

(temporal) On CCTV the police see a man entering a house, then a similar-looking person coming out later, and they judge it is the same man.

The distinction I am bringing to the fore here is that between ($a_1$), the unconceptualized perception of objects, and all the other levels, which involve concepts. Kant is surely right to emphasize the interdependence of conceptualized intuitions ($a_2$) and judgments (b). But I suggest that we need to extend Kantian theory to recognize the distinction between ($a_1$) the unconceptualized, non-propositional, perceptual representation of objects (found in animals, infants, and to some extent in adult humans), and everything else, from ($a_2$) to (c). As we have noted, Burge defends ($a_1$) as a natural kind in psychology. Bill Brewer has offered a philosophical defence of what he calls the 'Object view' of perception against the recently fashionable 'Content View'.[36] According to the latter, the nature of perceptual experience is given by its propositional content, whereas according to Brewer it consists in a more primitive, non-conceptual 'acquaintance' with mind-independent objects. Perhaps Kant would be happy to find recent psychology and philosophy combining to confirm something that he only rather dimly realized.

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[36] B.Brewer, *Perception and its Objects* (Oxford: Oxford University Press, 2011), 54–5, 69, 80, 93, 134, 1401, 145, 151.



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